



Prescribing Pattern of Drugs in General Medicine OPD in a Tertiary Care Hospital

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ABSTRACT

A Prescription is defined as a health-care program implemented by a physician in the form of instructions that govern the plan of care for an individual patient. The fact that a prescription instructs someone to 'take' rather than 'give', makes it clear that it is directed at the patient, and is not directly an instruction to anyone else. A prospective observational study was conducted over 3 months and data were collected from a total of 150 patients in General Medicine OPD. The collected data were then analysed using various tools. Excel sheets were used to tabulate the data, which was subsequently utilized to generate relevant graphs and tables. The collected data will be analysed by using suitable statistical methods. A total of 150 prescriptions were recorded. Based on the average no. of drugs per prescription was 3.23%. The total drugs of the study population were found to be prescribed by tablet dosage form (50.1%). Majority of the drugs were prescribed by oral route (98.66%) when compared to parental route of administration (1.33%). Antibiotics emerged as the most prescribed class of drugs (19.58%). This study concludes that crucial role of clinical pharmacist's is to ensure proper medication use by prescribing patterns as per WHO core indicators. The current study could assess the prescribing pattern of drugs in General Medicine OPD.

Keywords: Medicine outpatient, Prescriptions, Essential drug list, rational drug use, WHO core indicators

INTRODUCTION

The Prescription is one of the most important therapeutic transactions between physician and patient. The word 'prescription', derives from 'pre' (before) and 'script' (writing, written), which denotes that it is an order that must be written down before or for the preparation and administration of a drug. Commonly, the term prescription is used to mean an order to take certain medications. A prescription is defined as a health-care program implemented by a physician in the form of instructions that govern the plan of care for an individual patient. The fact that a prescription instructs someone to 'take' rather than 'give', makes it clear that it is directed at the patient, and is not directly an instruction to anyone else. Prescription writing is a crucial task and suggests prescriber's responsibility towards the clinical care and the safe monitoring of the patient thus also carries legal implications.¹

Prescription analysis and review of medication records help in identifying the drug-related problem depending on patient-related factors drugs or drug-drug interaction between different prescribed drugs. Among elderly patients, poly pharmacy is fetching a major common problem and it is projected to be the 5th major cause of death.²

The misuse of prescription drugs and the illicit sales of pharmaceuticals without proper prescriptions have emerged as significant public health concerns, creating complex challenges for communities around the world. Prescription drug misuse involves the use of medications outside the scope of a healthcare professional's guidance, encompassing scenarios such as overuse, self-medication, or diversion for recreational purposes. Together, these practices pose significant risks, including adverse health outcomes, increased healthcare costs, and the perpetuation of a thriving black market for pharmaceuticals. To make a causal inference it is necessary to document an association between drug use and the adverse outcome, confirm that drug use preceded the outcome, and exclude alternative explanations of the association, such as reverse causation and confounding.. The absence of proper regulatory oversight in such transactions further exacerbates these issues, as unscrupulous actors exploit regulatory gaps for financial gain, often at the expense of public health.³

The Prescription is order for medication issued by a physician, dentist or other properly licensed medical practitioner. Also it is important transaction between the physician and the patient'. It is an order for a scientific medication for a person at a particular



time. Prescribing drugs is an important skill which needs to be continuously assessed and refined accordingly. It not only reflects the physician's knowledge of pharmacology and path physiology but also his/her skill in diagnosis and attitude towards selecting the most appropriate cost-effective treatment. Many factors are known to adversely affect prescribing behavior such as unethical drug promotion, direct to consumer advertising, lack of knowledge and non-availability of drugs ⁽⁴⁾ This could be countered to a great extent by drawing up an essential drugs list, preparation of treatment guidelines, conducting periodic prescription Audits and continuing medical education.⁴

MATERIALS AND METHODS:

A prospective observational study was conducted over 3 months at Navodaya Medical College Hospital and Research Centre, Raichur. Data was collected from a total of 150 patients from General Medicine OPD. The collected data were then analyzed using various tools. Excel sheets were used to tabulate the data, which was subsequently utilized to generate relevant graphs and tables. The demographic details, medication details, route of administration, average number of drugs prescribed in a prescription, drug dosages, category of drugs are recorded in data collection form.

Inclusion Criteria:

- Patients attending the general medicine OPD.
- Patients of both gender.

Exclusion Criteria:

- Patients not willing to participate.
- Patients other than General Medicine Department are excluded.

Ethical consideration

This study was approved by the Institutional Ethics committee of study hospital.

Statistical Analysis:

Descriptive statistics, such as total numbers, mean, frequency, and percentage, were used to analyse the data from the data entry sheets.

RESULTS:

A total of 150 patients were included in the study during the data collection period.

Table 1: Based on distribution of age in years.

The majority of the participants were under the age group 41 – 50 years.

Age	Frequency	Percentage
11-20	14	9.33%
21-30	22	14.66%
31-40	23	15.33%
41-50	31	20.66%
51-60	26	17.3%
61-70	24	16.1%
71-80	10	6.66%



Table 2: Distribution based on gender

In a study analyzing of 150 patients, majority of them were females.

Gender	Frequency	Percentage
Male	63	42.1%
Female	87	58.2%

Table 3: Average number of drugs per prescriptions

In most of the prescriptions 5 drugs were prescribed followed by 2 drugs.

Prescription containing no of drugs	Frequency	Percentage
01	04	2.66%
02	29	19.33%
03	35	23.33%
04	34	22.66%
05	46	30.66%
06	02	1.33%

Table 4: Distribution based on dosage forms

In the present study, categorization based on dosage forms was listed. The results revealed that majority of the total drugs of the study population were found to be tablet dosage forms.

Dosage form	Frequency	Percentage
Tablets	243	50.1%
Syrups	79	16.2%
Nebulizers	75	15.46%
Nasal sprays	25	5.15%
Injections	10	2.06%
Others	53	35.33%

Table 5: Distribution based on route of administration

Majority of the drugs were prescribed by oral route when compared to parenteral route of administration.

Route of administration	Frequency	Percentage
Oral	148	98.66%
Parenteral	02	1.33%



Table 6: Distribution based on category of drugs

The current study reports that the major classes of drugs prescribed in general medicine OPD are antibiotics.

Category	Frequency	Percentage
Antibiotics	95	19.58%
Anti-histamines	36	7.42%
Anti-pyretics	50	10.30%
MVIs	90	18.55%
Bronchodilators	12	2.47%
Anti-emetics	17	3.50%
NSAID'S	19	3.91%
Anti-hypertensive's	36	7.42%
Anti-diabetics	32	6.59%
Anti-thyroid	20	4.12%
PPIs	55	11.34%
Anti-diarrheal	23	4.74%

Table 7: Analysis of prescriptions in light of WHO prescribing indicators

A total of 150 prescriptions were collected randomly analyzed. A total of 485 drugs were prescribed average number of drugs per prescriptions. Drugs were prescribed from EDL of total prescribed drugs.

Parameters	Percentage
Total no. of prescriptions analyzed	150
Total no. of drugs prescribed	485
Average no. of drugs per prescription	3.23%
Total no. of antibiotics prescribed	95
Percentage of antibiotics prescribed	19.58%
Percentage of injections prescribed	9.17%
Percentage of drugs from EDL	34.04%

DISCUSSION

The present study was conducted on prescribing pattern of drugs in general medicine OPD, Raichur city, Karnataka, which was conducted for the duration of 3 months.

In our study, a total of 150 prescriptions were included. Out of which majority of them were females 87 accounting for (58.2%) males 63 accounting for (42.1%). This is depicted in Table 1. On age group categorization has revealed that majority of the patients fall under the age group of 41-50 (20.66%) and very less patients falls under the age group of 71-80 yrs (6.66%). This is depicted in Table 2. In the present study, categorization based on the average no. of drugs per prescription was 3.23%. In most of the prescriptions 5 drugs were prescribed (33.28%), followed by 2 drugs (26.86%), followed by 3 drugs (19.58%), 1 drug in 13.85% of prescriptions, 4 drugs were prescribed in only 4.56% of prescription. This is depicted in Table 3.

In the present study, the distribution of dosage form shows that tablets have been highly prescribed (50.1%) followed by syrups (16.2%), injections (2.06%), nebulizer (10.92%), nasal sprays (5.15%), and others (15.46%). This is depicted in Table 4. Out of 150 prescriptions most of the drugs were prescribed by oral route (97.9%) when compared to parenteral route (2.1%) of administration. This is depicted in Table 5. The current study reports that the major classes of drugs prescribed to the patients in the general medicine OPD are antibiotics (19.58%) followed by MVI (18.55%), PPI (11.34%) followed by antipyretic (10.30%) and the least prescribed drugs were bronchodilators (2.47%). This shows that major class of drugs prescribed among patients are antibiotics and multivitamins. This is depicted in table 6. A total of 150 prescriptions were collected randomly analyzed. A total of 485 drugs were prescribed average number of drugs per prescription were 3.23%. Drugs prescribed from EDL accounted for about 36.04% of total prescribed drugs. Total no. of antibiotics prescribed were 95 where as percentage of antibiotics prescribed 19.58%. This is depicted in Table 7.



CONCLUSION

This study investigates prescription pattern of drugs in general medicine out-patient department. The areas of concerned reported that increased use of antibiotics and optimal use of bronchodilators. This study concludes that crucial role of clinical pharmacist's is to ensure proper medication use by prescribing patterns as per WHO core indicators.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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Conflict of Interest Statement: All authors have nothing else to disclose.

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