

Study of Rational and Irrational Prescribing in Different Government and Private Health Care Centres of Punjab

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Abstract

Introduction: Rational prescribing is the prescribing of drug by physician in the right way, right drug, right dose and right time to the right person through the right route of administration. On the other hand irrational prescribing is blanket term which is a combination of no drug need, drug abuse and misuse, use of polypharmacy and use of unsafe drugs.

Methodology: This was cross sectional study and was conducted at District Head Quarters of Gujranwala, Hafiz Abad, Wazirabad and Okara from July-August 2017. The case histories of 400 patients were scrutinized thoroughly on the basis of questionnaire filling related to rational and irrational guidelines and compare our results with international standards. We used a Microsoft Excel 2013 for to evaluate our results.

Results: A total of 400 patients were studied. Pharmacoeconomics analysis shows that in 177 patients' drug therapy is rational while in 223 patients' medications prescribed were irrational.

Conclusion: It is the need of the hour that the mutual relationship among the medical health care professionals is necessary like doctors, pharmacists, nurses, nutritionist, physiotherapist and other technicians to provide optimum and rational drug therapy to the patients.

Keywords: Drug Therapy; Rational Therapy; Irrational therapy

Introduction

Causes of irrational drug use

- Irrational prescribing practices of doctors.
- Dispensing by pharmacists and drug sellers.
- Drug pricing policies and promotional activities of the pharmaceutical industry.
- Lack of information, education and communication on rational drug use to providers and consumers.
- Lack of effective control and regulatory mechanisms on drug use.
- Lack of political will and leadership to promote rational use.

Medicines play an important role in healthcare delivery and when used properly, can help cure diseases, relieve symptoms and alleviate patient suffering. Nonetheless, irrational use of medicines remains a major issue facing most health systems across the world. The World Health Organization (WHO) estimates that more than half of all medicines are inappropriately prescribed, dispensed, or sold. Additionally, around 50% of patients fail to take their medicines correctly.

Methodology

Study design

It was a cross sectional study. It was carried out at Government district headquarters of Gujranwala, Wazirabad, Okara and different private clinics was also included in our study from above mentioned cities.

Patients size

It included 200 patients from private clinics and 200 patients from Govt. Hospitals. If we explain number of patients on the basis of cities then we concluded that we take 100 patients from each city [1-6].

Study duration

The period of study was 20 July 2017 to 18 Aug 2017.

Inclusion and exclusion criteria

This study was restricted to patients of Diabetes Mellitus, Hepatitis, Ischemic Heart Disease, Malaria, Hypertension and Tuberculosis. Only these patients were added in our study other all were eliminated. All other patients with these diseases were excluded from the study and total of 400 patients were enrolled in the study.

Ethics approval

Our study was approved by research committee of University of Sargodha and gave us permission to collect data and evaluate it on the basis of different variables [7-14].

Method of sampling

The Pharmacological data of patients was collected from ward history sheets. Mainly our study was based on prescription based as which we concluded from this which percentage of patients receives rational medication and which receive irrational medications. We collected prescription from clinics and hospitals and investigated them on the basis of few questions which was we prepared for our study.

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Received: November 27, 2017; **Accepted:** January 06, 2018; **Published:** January 13, 2018

Citation: Bashir T, Zafar MZ, Ahsan M, Asim M, Abu-Huzaifa M (2018) Study of Rational and Irrational Prescribing in Different Government and Private Health Care Centres of Punjab. J Pharmacovigil 6: 250. doi:10.4172/2329-6887.1000250

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Results

Evaluation of prescription on the basis of health care units

First of all, we evaluated our research study on the basis of health care units (Clinics and Govt. Hospitals). In this we took 200 patients from each health care unit. In clinics which patients we took from them 86 was male and 114 were females, on the other hand in [14-20] hospitals 95 and 105 males and females respectively. If we see rational and irrational prescribing in them then we concluded that in clinics 63% prescribing is rational and 37% was irrational prescribing. In government hospitals 25.5% and 74.5% rational and irrational prescribing respectively was seen. We can show these results from Table 1 and Figure 1.

Evaluation on the basis of cities

Here, we evaluated our research study on the basis of cities which was Gujranwala, Okara, Wazirabad and Hafiz Abad. In this we took 100 patients from each city. From each city we took 50 patients from clinics and 50 from government hospitals. If we see results on the basis of rational and irrational [21-25] then see that rational prescribing was 48, 41, 45 and 43 in Gujranwala, Okara and Wazirabad and in Hafiz Abad respectively and irrational prescribing was 52, 59, 55 and 57 in Gujranwala, Okara and Wazirabad and in Hafiz Abad respectively (Table 2).

Prescriptions evaluation on the basis of economic status of patients

In this we evaluate patients on the basis of their economic status

Health care units	Number of patients	Gender		Rational		Irrational	
		Male	Female	Total	Percentage	Total	Percentage
Clinics (Private)	200	86	114	126	63%	74	37%
Hospitals	200	95	105	51	25.50%	149	74.50%

Table 1: Evaluation of prescription on the basis of health care units.

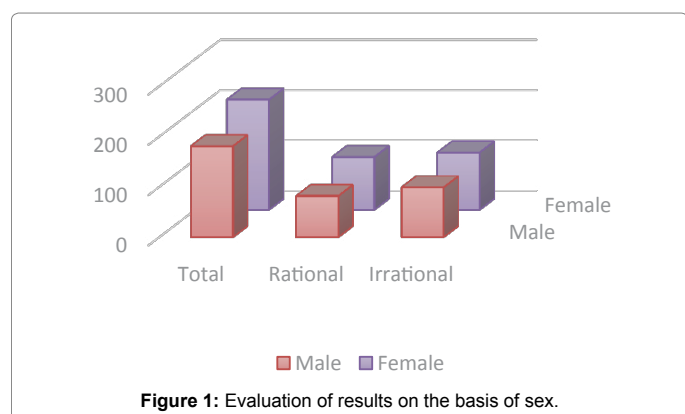


Figure 1: Evaluation of results on the basis of sex.

Cities	Number of patients	Health care units		Rational	Irrational
		Clinics (Private)	Hospitals		
Gujranwala	100	50	50	48	52
Okara	100	50	50	41	59
Wazirabad	100	50	50	45	55
Hafiz Abad	100	50	50	43	57
Total	400	200	200	177 (44.25%)	223 (75%)

Table 2: Evaluation on the basis of cities.

Patients/Prescription evaluation on the basis of Economic Status

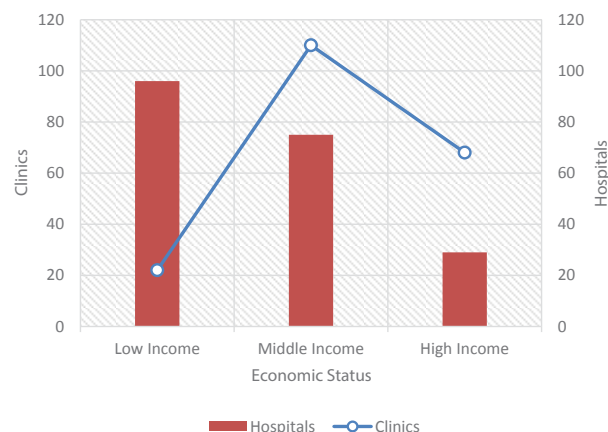


Figure 2: Evaluation of prescriptions on the basis of pharmacoconomics.

and this find by verbal communication with patients and set a criteria for this that if a patient income in less than 20000 then this lies in low income, 20000-50000 lies in middle income and more than 50 K income patient was in high income status. From this we evaluated that mostly low income and middle income persons preferred government hospitals which was economically suitable for them. By our results we find that patients who preferred clinics were 22, 110 and 68 belonged from low income, middle income and high income respectively. On the other hand patients which preferred hospitals were 96, 75 and 29 of low income, middle income and high income respectively (Figure 2).

Discussion

Prescriptions evaluation for pharmacoconomics study is done on the basis of cities and health care units including hospitals and clinics to check the rational and irrational prescribing. Prescriptions including both male and female and the ratio of female in different health setup is greater than male. The results shown that the rational prescribing is done in private clinics (63%) but in hospitals there is no proper setup for rational prescribing but some hospitals done (25.5%). If we see overall result of rational and irrational prescribing then this is 44.25% and 55.75% respectively. From our study we also evaluated that as we know Pakistan is a middle income country so there is not well established health care units are available which provided a good health. When we study the economic status of patients and complete therapy cost then therapy cost in clinics is greater than hospitals so peoples moves towards hospitals but the problem is irrational prescribing. A brief explanation of pharmacoconomics in the curriculum of health care professionals i.e. MBBS, Pharm-D and nursing will prove fruitful in future for increasing coordination between health care professionals and ultimately for rational therapy of medications with respect to pharmacoconomics. Simply rational prescribing of medicines provides health and wealth and in a country like Pakistan where there are limited resources of economics and finance it is the need of hour that we should move toward the rational prescribing. If the rate of rational prescribing will greater than the irrational prescribing then this will support to the patient in his health and it will also be cost effective. The aim of rational prescribing is to minimize the overall cost of therapy.

Conclusion

The irrational use and non-prescription sale of medicines will not only promote health problems but can also be linked with pronounced adverse events including drug adverse effects, high cost and complications. Although the practice of non-prescription sale/ Irrational use of medicines of drugs is inappropriate and unethical. Changing the practice of nonprescription sale and irrational prescribing requires a sustained restoration of the Pakistani Health System in a bid to make medical care available to people and promote education of the population and physician for the rational use of medicines.

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