

# A Questionnaire Based Survey to Assess the Knowledge about Rational Use of Medicine among Interns in a Tertiary Care Centre

Dr. Prasannakumari .S<sup>1</sup>, Dr. M. Shanthi M.D<sup>2</sup>, Dr. M. S Ahil M.D<sup>3</sup>, Dr. Parameswari .R M.D<sup>4</sup>

<sup>1</sup>Post Graduate, Institute of Pharmacology, Madurai Medical College, Madurai

<sup>2</sup>Professor, Institute of Pharmacology, Madurai Medical College, Madurai

<sup>3</sup>Assistant Professor, Institute of Pharmacology, Madurai Medical College, Madurai

<sup>4</sup>Director and Professor, Institute of Pharmacology, Madurai Medical College, Madurai

**Abstract:** ***Aims & Objective:** To evaluate the knowledge of rational drug prescribing pattern in interns in tertiary care centre. **Methods:** A pre-tested semi-structured questionnaire was designed. 100 interns were instructed for completing the questionnaire. **Results:** About 58% of the interns were aware of Rational Use of Medicines. 33% knowledgeable about Essential drug list, 28% about Essential medicine, 54% about P drugs. 30 % claimed to practice rationally. **Conclusion:** Adequate prescribing knowledge is a basic requirement for rational prescribing. Educational interventions to promote rational use of medicine should be organized regularly to promote implementation of these concepts.*

**Keywords:** Rational use of medicine, prescribing skills, essential drug list

## 1. Introduction

Rational use of medicines (RUM) is recognized as an important factor in health policy<sup>[1]</sup>. Rational drug therapy is stepwise selection of drugs for the particular disease for an individual patient among the available drugs, based on pharmacokinetic and pharmacodynamic property, safety profile, cost of the drug and the patient's condition. The pace of developments over the recent years in the field of drugs has further complicated the process of rational prescribing, with the availability of many new drugs. WHO established essential medicine list (EML) as a major step towards promoting RUM. "Model List of Essential Drug" and essential drugs according to WHO are "List of drugs that satisfy the health care needs of the majority of the population; they should therefore, be available at all times in adequate amount and in appropriate dosage forms"<sup>[2]</sup>. P drug is a personal choice of clinician to use a drug which includes the name of the drug, strength, dosage form, schedule and duration of treatment. P drug enables doctor to avoid repeated searches of good drugs and you will get to know their effects and side effects thoroughly<sup>[4,5]</sup>. The concept of P drug was introduced recently to rationalize the drug use. Further P drugs will differ from country to country and between doctors, because of varying availability and cost of drugs. The P drug differ in national formularies, essential lists, medical culture, and individual interpretation of information. Despite all the measures still irrational prescribing is prevalent in our country. The overall amount of medical information is growing at an alarming rate and the information is also vast. It is better we make interns budding doctors be aware of RUM and motivate them for the rational prescribing. Understanding the knowledge and perception of medical students will help us to identify the problems in clinical pharmacology teaching, and the method

to implement RUM. So, the aim of the present study attempts to assess the prescribing knowledge of interns.

## 2. Aim

To evaluate the knowledge of rational drug prescribing in interns in tertiary care centre.

## 3. Methodology

**Study Design and Study Centre:** A cross-sectional descriptive questionnaire based study conducted at Madurai Medical college, Madurai involving 100 interns. This was started after obtaining prior permission from institutional authorities.

**Study Group:** All interns who had completed at least 6 months of internship and who were willing to participate in the study were included assuming that they would have been exposed to sufficient clinical case load and prescription.

**Study Period:** November: 2015

A complete enumeration of all the 100 interns as study subjects during the study duration was done. A pre-tested semi-structured questionnaire was designed and all the subjects were explained regarding the study purpose and the instructions for completing the questionnaire.

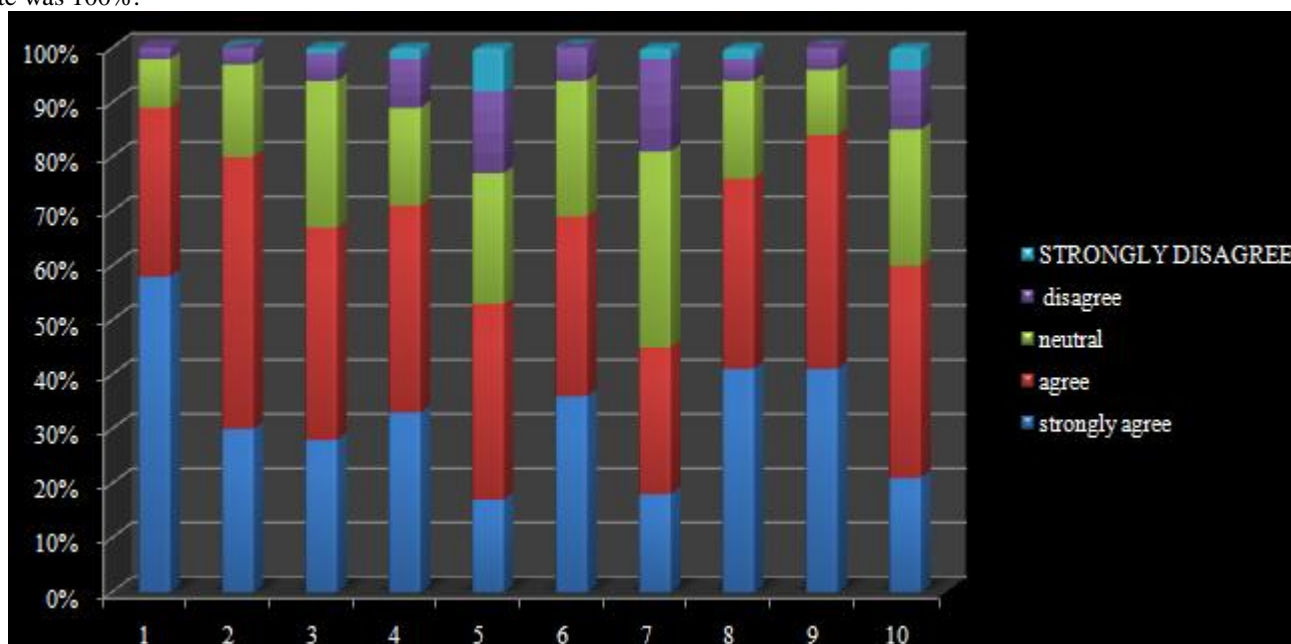
**Questionnaire:** The questionnaire was framed in English language after getting validation by our professors. The questionnaire contain ten questions and were related to knowledge of rational use of medicine in clinical pharmacology and scored from 1 to 5 (Likert scale) for each item.

## 4. Results

Among the 100 subjects recruited in this study males were 61(61%) and females 39 (39%).Majority of them were in the age group of 22 -25(84.8%).All the interns were graduated from Madurai Medical College, Madurai and the response rate was 100%.

## 5. Discussion

The results of the present study revealed that majority of students were taught prescription writing in their undergraduate pharmacology



**Figure 1:** Percentage of Response for each part of questions

teaching .The study conducted by Upadhyaya et al has shown similar results [3]. Majority of them felt that undergraduate clinical pharmacology teaching has prepared them to prescribe rationally and safely. Most common problem encountered by interns was inadequate knowledge of cost, brand names, dose, safety and efficacy of drugs. About 58% of the interns were aware of the term RUM.30 % of interns claimed to practice rationally. The awareness of

RUM was satisfactory in interns. Growing consumer awareness about the drug at present has increased the importance of RUM in terms of socio-economical and legal aspects, so knowledge of RUM is essential in day to day clinical practice. 28% of interns were aware of EM (essential medicine).But; practice of EM was significantly low in interns. This is due to non-availability of EML at work, lack of

**Table 1:** Percentage of Response for each part of questions

S no	Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	Are you aware of the term Rational use of medicine?	58	30	10	2	-
2	Do you always prescribe rationally?	30	50	17	3	-
3	Are you aware of the term Essential medicine?	28	39	27	5	1
4	Do you always prescribe from the essential drug list of india?	33	38	18	9	2
5	Are you aware of the term P-Drug?	17	37	24	14	8
6	Do you write the prescription in full format(drug,dosage, duration)	36	33	25	6	-
7	Do you prefer ,fixed dose combination FDC ?	18	27	36	17	2
8	Is efficacy the most important criteria of prescribing drugs?	41	35	18	4	2
9	Is cost effectiveness the important criteria of prescribing drugs?	41	43	12	4	-
10	Undergraduate training in clinical pharmacology has equipped me to prescribe safely/rationally?	21	39	25	11	4

regional standard treatment guidelines and availability of large number of drugs. About 33% of the interns were aware of EDL. Essential drug list (EDL) serve as reference document for correct dosage form and strength for prescribing. The appropriate use of medicines selected in the list promote rational use of medicines hence the knowledge of EDL is key to improve public health. Prescribing from EDL pattern differ from 40 % to 90% in various institutions shown by

various studies. Only 15% participants knew concept of P drugs. It includes drug treatment of first choice to the clinical condition with its strength, dosage forms and duration of treatment, necessary warning and information to the patients. About 41% of intern's considred cost of drug while prescribing. Pharmacoeconomics is a field in pharmacology which measures and compares the cost and consequences of drug therapy to health care system and

society. Knowledge of pharmacoeconomics is of grave importance in today's clinical practice, because of rapidly increasing number of newer and me-too drugs. So consideration of cost with efficacy is paramount importance.

## 6. Conclusion

Adequate prescribing knowledge is a basic requirement for rational prescribing. To increase the confidence to prescribe safely and rationally, we have to enhance our undergraduate teaching in the aspects of rational drug prescription. This also can be incorporated in the orientation programme for interns as soon as they pass the final year exams and join internship. Because at that time they will be more receptive to these aspects than IInd year. The orientation programme should be directed towards more practical approach which include selection of drug, efficacy, safety and cost effectiveness. It should also include the knowledge of Essential Drug List (EDL) and Pdrug. Educational interventions to promote RUM should be organized regularly to promote implementation of these concepts.

## References

- [1] Shubha R, Praveen Prasad SN, Manjunath GN." Role of undergraduate clinical pharmacology teaching in rational prescribing:an interneer's perception".Journal of Evolution of Medical and Dental Sciences 2013; Vol.2, Issue 46, November 18; Page; 8874-8879.
- [2] Shailesh Mundhava , Usha Lalwani , Ajita Pillai."Prescribing knowledge,attitude,practice of interns and post-graduates of a tertiary care hospital in India".World Journal of Pharmacy and Pharmaceutical Sciences 2015;Vol.4,Issue 06, May 19;Page; 451-458.
- [3] Upadhyaya P, Seth V, Sharma M, Ahmed M, Moghe VV, Khan ZY,et al."Prescribing knowledge in the light of undergraduates clinical pharmacology and therapeutics teaching in India;views of first year postgraduate students".Adv Med Educ Pract [Internet]. 2012 Jan 3;Page 47-53.Avaible from <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3650870&tool=pmcentrez&rendertype=abstract>
- [4] Parmar D, Jadav S."The concept of personal drugs in the undergraduate pharmacology practical curriculum". Indian J Pharmacol[Internet].2007 [cited 2017 june1]; 38 (3): 165-7.Avaible from: <http://www.ijp-online.com/article.asp?issn=02537613;year=2007;volume=39;issue=3;spage=167;aualast=parmar>
- [5] Vries T De. Guide to good prescribing.Geneva World...[Internet]. 1994 [cited 2017 june1];Avaiblefrom:<http://www.politicsofmedicines.org/article/who-guide-to-good-prescribing?print=1>