

A study on role of Doctor of Pharmacy in identifying and reporting of drug related problems and its comorbidities in inpatient units of a tertiary care teaching hospital

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ABSTRACT

AIM: The study aims to assess the role of DOCTOR OF PHARMACY in identifying drug related problems in inpatient units in a tertiary care teaching hospital.

OBJECTIVES: The main objective of the present study includes identification and reporting of drug related problems like Drug-drug interaction, Adverse drug reactions, Drug use without indication, Therapeutic duplication, Allergy / intolerance / poisoning, Improper drug, dose, route, regimen, Awareness/adherence problems.

METHODOLOGY: Study Design: It is a observational and interventional study. Study Period: 24 months from July 2015 to July 2017. Study site: GENERAL MEDICINE, PEDIATRICS, OPHTHALMIC, SURGERY, ORTHOPEDICS, ENT, ART, STD Departments at Rajiv Gandhi Institute of Medical Sciences (RIMS), Kadapa. Sample size: A Total of 2742 prescriptions were collected for this study. Source of Data: All the required data was collected from patients through Patient representative interview and case sheets and treatment charts. Inclusion criteria: Prescriptions of Patients with aging above 18 years with multiple diseases with poly pharmacy and who are willing to participate in the study. Exclusion criteria: Prescriptions of Patients who are not willing to Participate in the study.

RESULTS AND DISCUSSION: In the present study a total of 2742 prescriptions were analyzed for Drug related problems. After Analysis the following drug related problems were overcome like Drug-drug interaction (450), Adverse drug reactions (398), Drug use without indication (305), Therapeutic duplication (590), Allergy / intolerance / poisoning (192), Improper drug, dose, route, regimen (400) Awareness/adherence problems (407). And a total of 2742 Drug related problems were resolved. Prism Graph Pad software is used for this study and the P-Value is < 0.001 which concludes the present study is highly significant.

CONCLUSION: The present study concludes that Doctor Of Pharmacy professionals are those whose main objective is promotion of appropriate medication usage, and they can prevent the drug related problems which are not yet reported in Indian hospitals.

Keywords: drug related problems, comorbidities, tertiary care hospital

INTRODUCTION

Drug Related Problems are problems that arise due to drug during medication therapy like Drug-drug interaction, Adverse drug reactions, Drug use without indication, Therapeutic duplication, Allergy / intolerance / poisoning, Improper drug, dose, route, regimen, Awareness / adherence problems. Doctor Of Pharmacy is the branch of pharmacy in which pharmacists provide patient care that optimizes the use of medication and promotes health, wellness,

and disease prevention. They are Clinical pharmacists who care for patients in all health care settings but the clinical pharmacy movement initially began inside hospitals and clinics. Clinical pharmacists often work in collaboration with physicians, nurse practitioners and other healthcare professionals.

METHODOLOGY**AIM:**

The study aims to assess the role of **DOCTOR OF PHARMACY** in **identifying drug related problems in inpatient units** in a tertiary care teaching hospital.

OBJECTIVES:

The main objective of the present study includes identification and reporting of drug related problems like

1. Drug-drug interaction.
2. Adverse drug reactions.
3. Drug use without indication.
4. Therapeutic duplication.
5. Allergy/intolerance/poisoning.
6. Improper drug, dose, route, regimen.
7. Awareness/adherence problems.

METHODOLOGY:

Study Design: It is a observational and interventional study.

Study Period: The Present study was conducted for a period of 24 months from July 2015 to July 2017.

Study site : The Present study was conducted in **GENERAL MEDICINE, PEDIATRICS, OPTHALMIC, SURGERY, ORTHOPEDICS, ENT, ART, STD** Departments at Rajiv Gandhi Institute of Medical Sciences (RIMS), Kadapa.

Sample size: The Patients admitted in hospital with multiple diseases with poly pharmacy during the study period of 12 months and a total of 2742 prescriptions were collected for this study.

RESULTS:

Table 1.1 DISTRIBUTION OF MALE AND FEMALE PATIENTS IN DIFFERENT WARDS:

NAME OF THE INPATIENT UNIT.	NUMBER OF FEMALE POPULATION	NUMBER OF MALE POPULATION	TOTAL
GENERAL MEDICINE	354	290	644
PAEDIATRICS	98	104	202
OPHTHALMIC	100	108	208
SURGERY	450	286	736
ORTHOPAEDICS	90	106	196
ENT	169	100	269
ART	97	102	199
STD	165	123	288
TOTAL	1523	1219	2742

Source of Data: All the patients satisfying the inclusion criteria were selected from **GENERAL MEDICINE, PEDIATRICS, OPTHALMIC, SURGERY, ORTHOPEDICS, ENT, ART, STD** department in Rajiv Gandhi institute of medical sciences (RIMS) Government Hospital, Kadapa. All the required data was collected from patients through Patient representative interview and case sheets and treatment charts.

Inclusion criteria:

Prescriptions of Patients with aging above 18 years with multiple diseases with poly pharmacy, in **GENERAL MEDICINE, PEDIATRICS, OPTHALMIC, SURGERY, ORTHOPEDICS, ENT, ART, STD** inpatient wards.

Prescriptions of Patients having previous history of medical, medication problems

The Patients who are willing to participate in the study.

Exclusion criteria:

Prescriptions of Patients who are not willing to Participate in the study.

Prescriptions of Patients below 18 years of age group.

Prescriptions Other than **GENERAL MEDICINE, PEDIATRICS, OPTHALMIC, SURGERY, ORTHOPEDICS, ENT, ART, STD** all the remaining wards are excluded.

Fig 1.1 DIGRAMATIC REPRESENTATION OF DISTRIBUTION OF MALE AND FEMALE PATIENTS IN DIFFERENT WARDS:

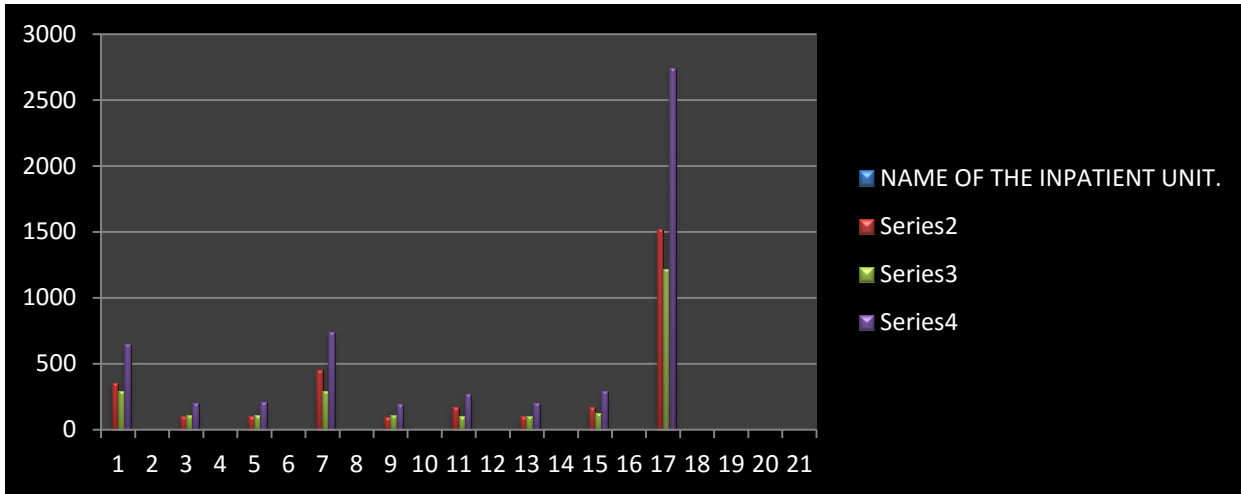


Fig1.2 DIAGRAMATIC REPRESENTATION OF DISTRIBUTION OF FEMALE PATIENTS IN DIFFERENT WARDS.

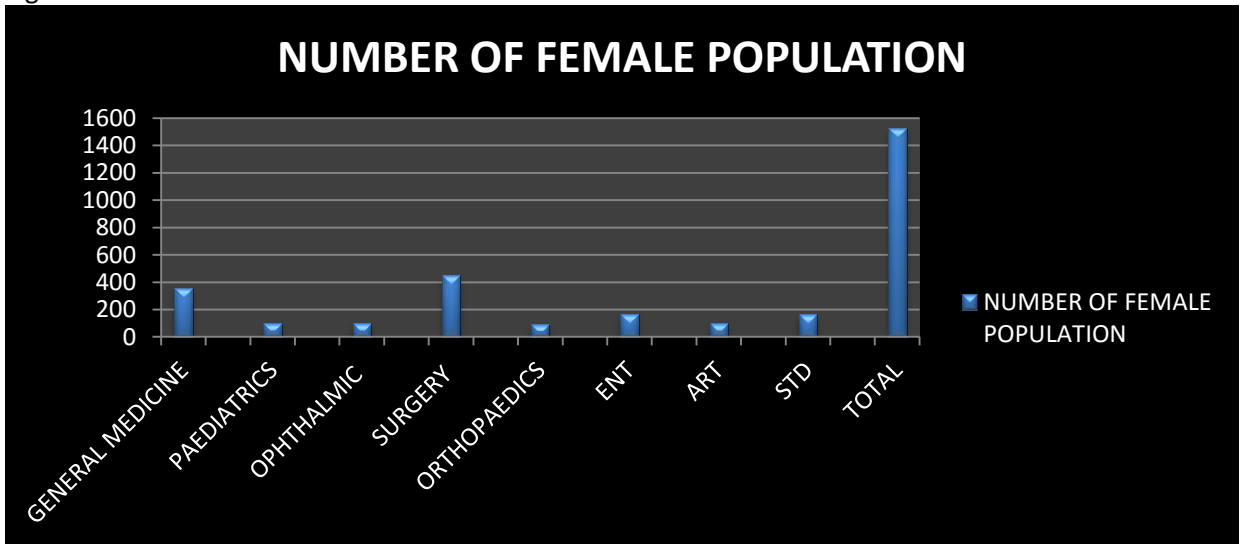


Fig1.3 DIAGRAMATIC REPRESENTATION OF DISTRIBUTION OF MALE PATIENTS IN DIFFERENT WARDS.

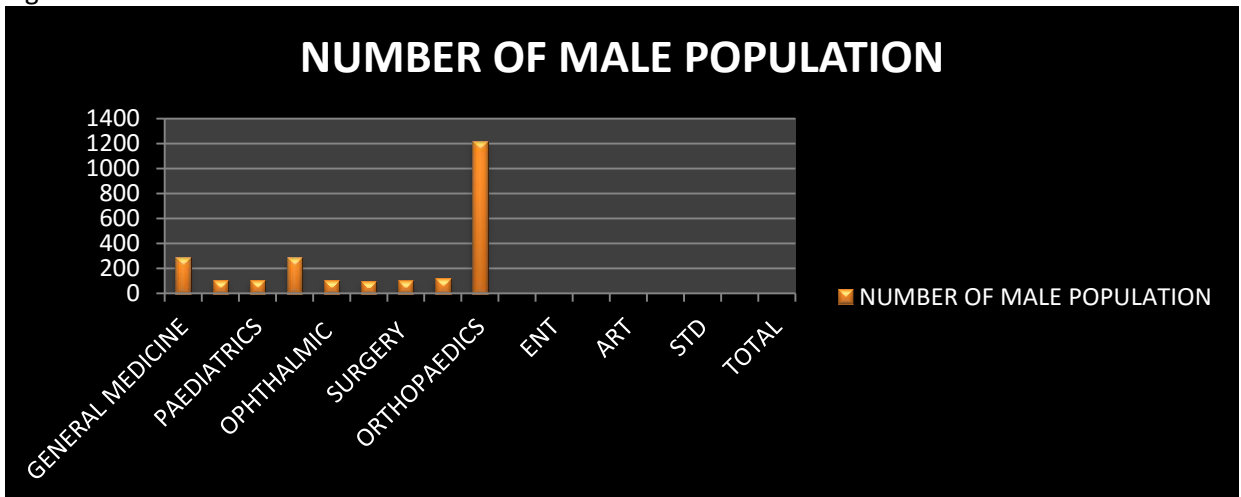


TABLE 1.2: DISTRIBUTION OF PRESCRIPTIONS WITH MULTIPLE DISEASES AND WITH POLYPHARMACY IN DIFFERENT WARDS:

NAME OF INPATIENT UNIT	NUMBER OF PRESCRIPTIONS
GENERAL MEDICINE	644
PAEDIATRICS	202
OPHTHALMIC	208
SURGERY	736
ORTHOPAEDICS	196
ENT	269
ART	199
STD	288
TOTAL	2742

Fig1.4: DIAGRAMATIC REPRESENTATION OF DISTRIBUTION OF PRESCRIPTIONS WITH MULTIPLE DISEASES AND WITH POLYPHARMACY IN DIFFERENT WARDS:

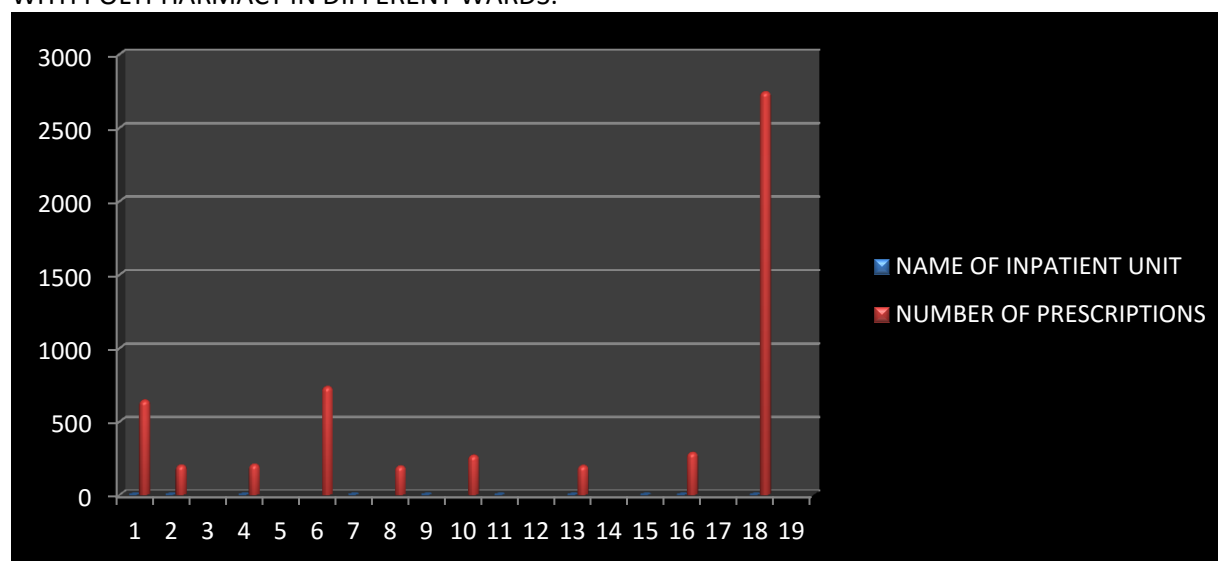
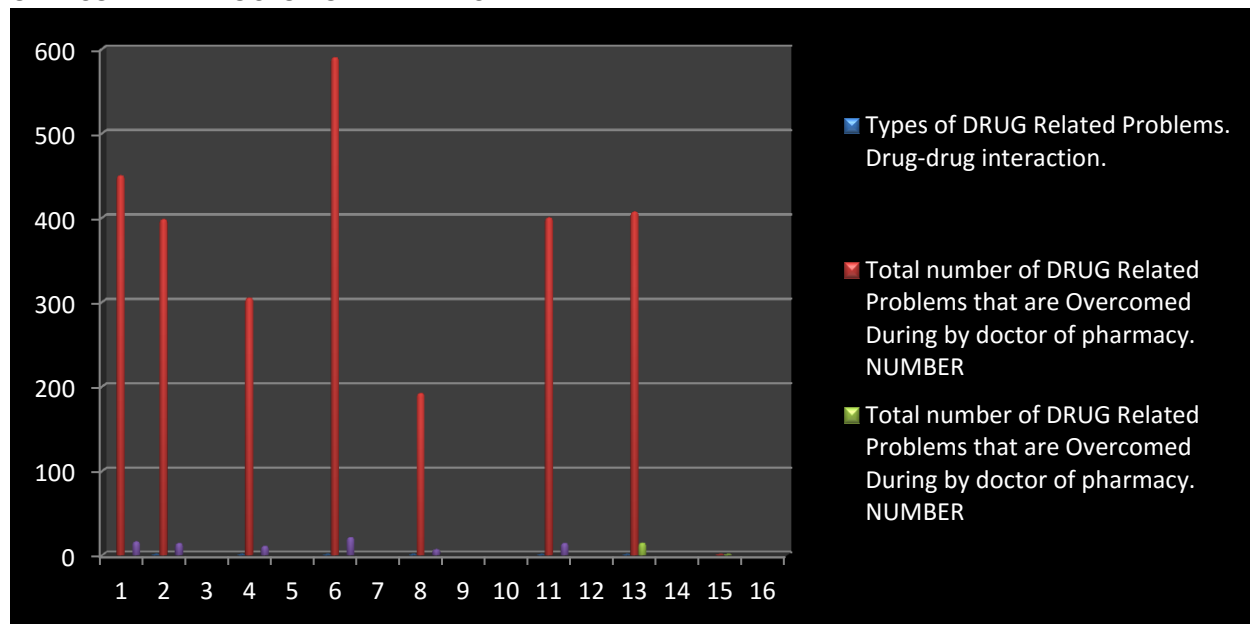


Table.1.3 DISTRIBUTION OF DRUG RELATED PROBLEMS THAT ARE OVERCOMED BT DOCTOR OF PHARMACY.

Types of DRUG Related Problems.	Total number of DRUG Related Problems that are Overcomed During by doctor of pharmacy.	
	NUMBER	PERCENTAGE
Drug-drug interaction.	450	16.41137
Adverse drug reactions.	398	14.51495
Drug use without indication.	305	11.12326
Therapeutic duplication.	590	21.51714
Allergy/intolerance/poisoning.	192	7.002188
Improper drug, dose, route, regimen.	400	14.58789
Awareness/adherence problems.	407	14.843180
	Total=2742	Total percentage=100.

Fig.1.5 DIAGRAMATIC REPRESENTATION OF DISTRIBUTION OF DRUG RELATED PROBLEMS THAT ARE OVERCOMED BT DOCTOR OF PHARMACY.



RESULTS AND DICUSSION

In the present study a total of 2742 prescriptions were analyzed for Drug related problems among them 1523 prescriptions belongs to female patients and 1219 prescriptions belongs to male patients. After Analysis the following drug related problems were overcome. Drug-drug interaction (450), Adverse drug reactions (398), Drug use without indication (305), Therapeutic duplication (590), Allergy/intolerance/poisoning (192), Improper drug, dose, route, regimen (400) Awareness/adherence problems (407). And a total of 2742 Drug related problems were resolved. Prism Graph Pad software is used for this study and the **P-Value Is < 0.001** which concludes the present study is highly significant.

CONCLUSION

The present study concludes that Doctor Of Pharmacy professionals are those whose main objective is promotion of appropriate medication usage, and they can prevent the drug related problems which are not yet reported in Indian hospitals. In India there is imbalance between physician and patient ratio as per recent surveys for every **1000** patients there is only one physician available due to this there is increased work load on physician due to this the physician cannot look over the complete safe medication therapy management here Doctor Of Pharmacy can serves as bridge between physician and patient in appropriate medication usage, so it is the duty of Indian government to get involve the Doctor Of Pharmacy in the actual patient care in Indian hospitals where they can prove themselves.

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