A Prospective Observation Study of Adverse Drug Reactions Due To and Medical Related Problems in the Treatment Chart Prescribed by Registered Medical Practitioner

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Abstract—Adverse drug reactions (ADR'S) are defined as the injury caused due to medications by a single drug or multiple drug with the prolonged administration and in some conditions which are not identified with the drug.

Materials and Methods:

Study Method: It was a prospective observational study carried out in the rural areas.

Study Site: The study was conducted in rural areas in and around Karimnagar with having minimum of 2700 houses.

Study Procedure: The study was done by collecting the information by using a HRQOL and WHO Questioner. Nearly considered 1800 people out of which 720 people are interested to give their information about health conditions and the use of drugs

Sample Method: All patients of age between 18-60 years were included in the study

Study Duration: The study was conducted for 12months from august 2016 to august 2017.

Inclusion Criteria: The people who are willing to give information.

People of both sexes.

Who are above the age of 18-60 suffered with any type of illness.

Medications used given by the RMP.

Exclusion criteria: Who are not willing to give the information.

Pregnancy and lactating mothers.

Of sane minded.

Aging below 18 years.

Study Material:

Patient Consent Form: Consent was collected by using self design consent form and was made into 3 languages.

Ethical Approval: The study was approved by institutional ethical committee and tertiary care hospital.

Data Analysis: A data was analyzed by different statistical software's in which the information is analyzed by using Microsoft excel 2007 and results were given in percentage.

Results: A total of 1800 people 720 are willing to fill the questionnaire regarding the RMP visits, conditions, medications used and treatment outcomes are discussed below.

Discussion: Out of 1800 people of rural area only 720 people are willing to give the information out of which the age group 18-60 (100%) of both sexes (100%). In this most of the people are unmarried with educational level of primary and Nutrional status of average and poor with average hygienic conditions and maximum are daily wage labour 420 (58.2%). The main reasons for visiting RMP is fever 706 (98.10%), cold 685 (95%), cough 685 (95%) and skin infections 368 (45%) and the drugs mainly prescribed by RMP's are paracetmol 185 (10.2%) and ranitidine 197 (10.9%). The different classes of drugs prescribed were mainly antibiotics and the people mainly suffered with headache 97 (13.4%) and abdominal pain. Common ADR's observed with single or multiple drugs are mainly dehydration 321 (44.58%), asthma 154 (21.38%) and in which the ADR's identified by family members or RMP are mainly fatigue 315 (43.75%) and vomiting. ADR's assessed by clinical pharmacist using Naranjo scale is mainly mild 135(72.29%). The ADR's after the treatment by RMP is mainly 0 and 1 ADR's, the treatment of RMP is no response is 325 (45.13%) and death of 2 patients and the survey was taken from nearby villages, mainly thimmapoor are more interested to visit to RMP than primary hospitals.

Conclusions: Our study concluded that most of the people in the rural areas mainly consult RMP's due to their low educational and economically backward people. The RMPs prescription contains many ADR's with unknown knowledge about the disease and drugs. It leads to many complications and serious events can takes place by the prescription.

I. INTRODUCTION

An adverse drug reaction is an injury caused by taking a medication. ADR's may occur following a single dose or prolong administration of a drug or result from the combination of two or more drugs [1]. ADR's are mainly USFDA defines a serious event as one when the patient outcome is one of the following death, life-threatening, hospitalization and disability- significant, persistent, or permanent change, impairment, damage or disruption in the patient's body function/ structure, physical activities or quality of life.[2]. A registered medical practitioner is a professional who practices medicine, which is concerned with prompting, marinating or restoring health through the study, diagnosis and treatment of disease, injury and other mental impairments. [3, 4]

II.   MATERIALS AND METHODS

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III.   RESULTS

A total of 1800 people 720 are willing to fill the questionnaire regarding the RMP visits, conditions, medications used and treatment outcomes are discussed below.

TABLE 1. Shows the demographic details of the patients including age, sex, marital status, educational level, Nutritional status, hygienic conditions and employment.

| Demographic details of the patient.	No of patients	Frequency (%)
Age		
18-27	153	21.25
28-36	272	37.7
37-45	135	18.75
46-54	106	14.7
55-60	54	7.5
Sex		
Male	448	62.2
Female	272	37.7
Marital status		
Married	240	33.3
Un married	480	66.7
Educational level		
Primary	180	25
Secondary	300	41
Tertiary	240	33
Nutritional status		
Poor	144	20
Average	236	32.7
Above average	160	22.3
Excellent	180	25
Hygienic conditions		
Bad	240	33.4
Average	300	41.6
Good	180	25
Employment		
Unemployed	200	28
Daily wise labour	420	58.2
Employed	100	13.8
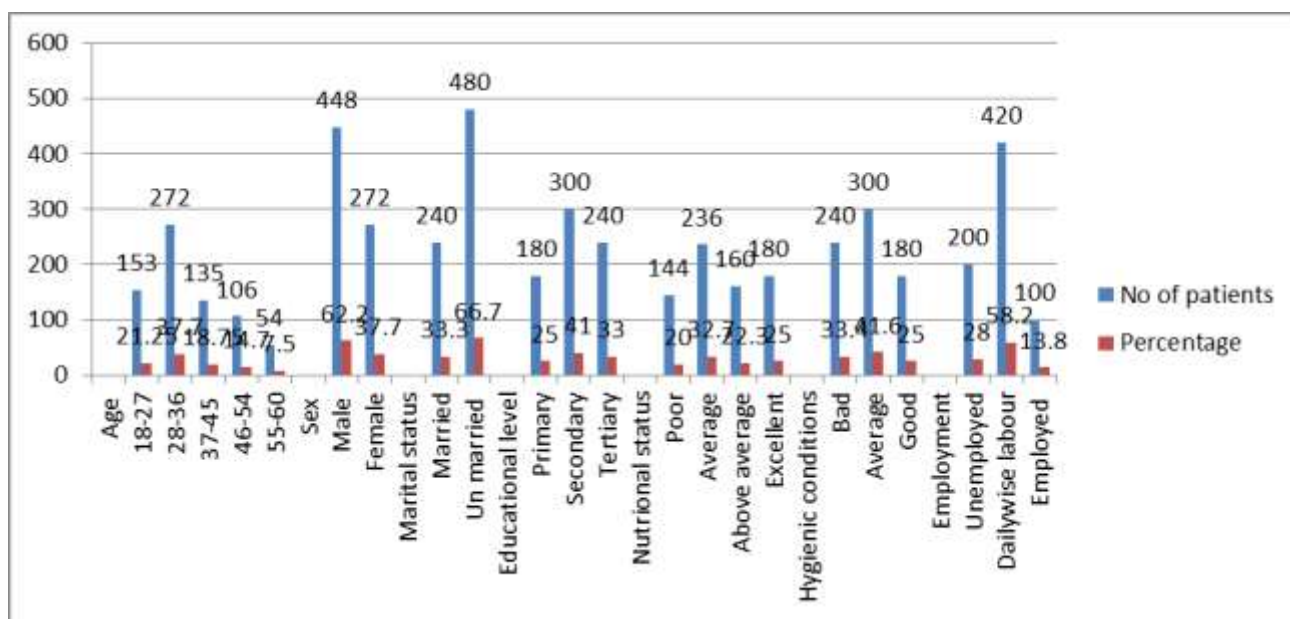
TABLE 2. Shows the reasons for visiting RMP's and treat the illness during consultation.

Reasons to visit RMP	No. of people	Frequency (%)
Fever	706	98
Cold	685	95
Cough	685	95
Dizziness	612	85
Fatigue	584	80
Constipation	503	70
Diarhoea	360	50
Vomiting	685	95
Pain	685	95
Stomach ache	706	98
Skin infection	328	45
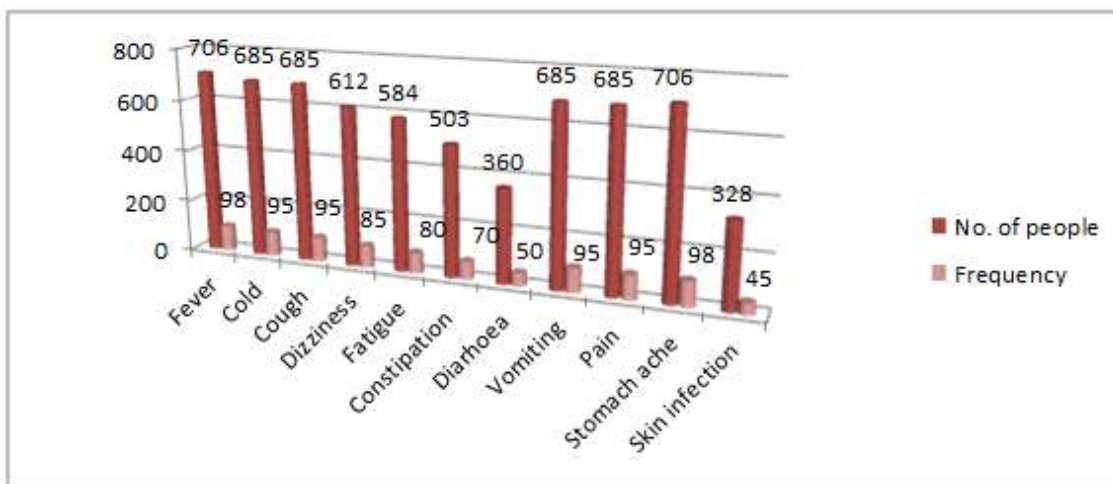
TABLE 3. Shows the drugs prescribed by the RMP's after their consultation.

Drugs prescribed by RMP	No. of persons	Frequency (%)
Amlodipine	99	5.5
Paracetamol	185	10.2
Cefixime	98	5.4
Chloroquine phosphate	88	4.7
Ondansetron	105	5.8
Meclopromide	96	5.3
Ampicillin	176	9.7
Amoxicillin	99	5.5
Ofloxacin	93	5.1
Diclofenac	89	4.9
Cefatriaxone	97	5.3
Ranitidine	197	10.9
Metformin	98	5.4
Salbutamol	120	6.6
Ciprofloxacin	160	8.8

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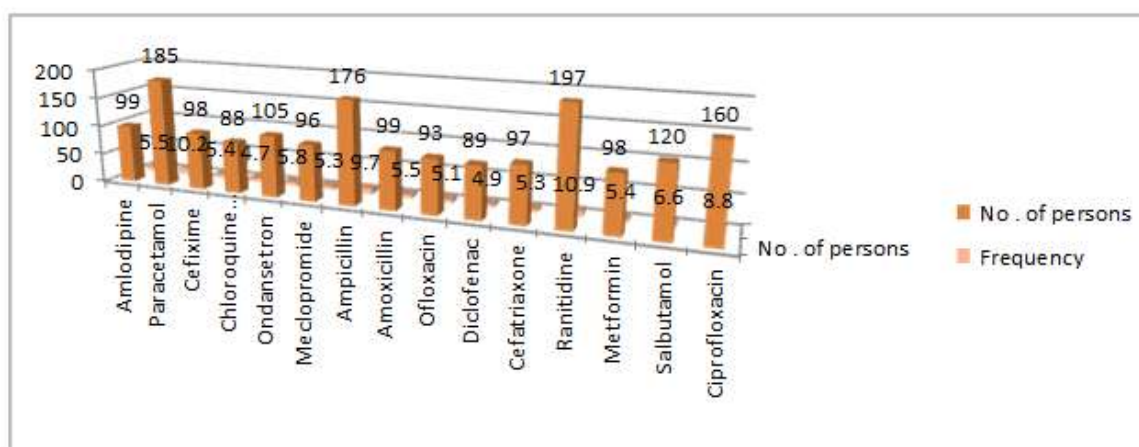
TABLE 4. Shows the classes of drugs prescribed by RMP's by knowing or unknowingly.

Classes of drugs	No .of drugs	Frequency (%)
Antibiotics	6	66.6
NSAID's	2	13.3
Anti malarial	1	6.6
Antipyretic	1	6.6
Antiemitics	2	13.3
Bronchodialators	1	6.6
Antidiabetic	1	6.6
Antihypertensive	1	6.6
Antiulcerants	2	13.3
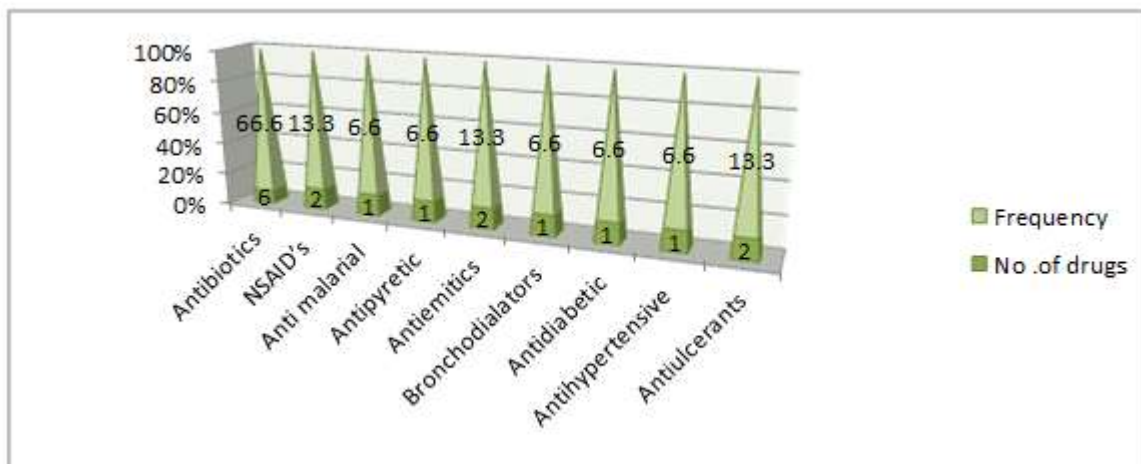
TABLE 5. Shows the common ADR's observed with the drug's prescribed by RMP's.

Common ADR's	No. of people	Frequency (%)
Abdominal pain	87	12
Pulmonary edema	65	9
Rash	84	11.6
Headache	97	13.4
Anorexia	31	4.3
Fatigue	73	10.1
Drowsiness	81	11.2
Nausea	86	11.9
Vomiting	70	9.7
Constipation	46	6.3

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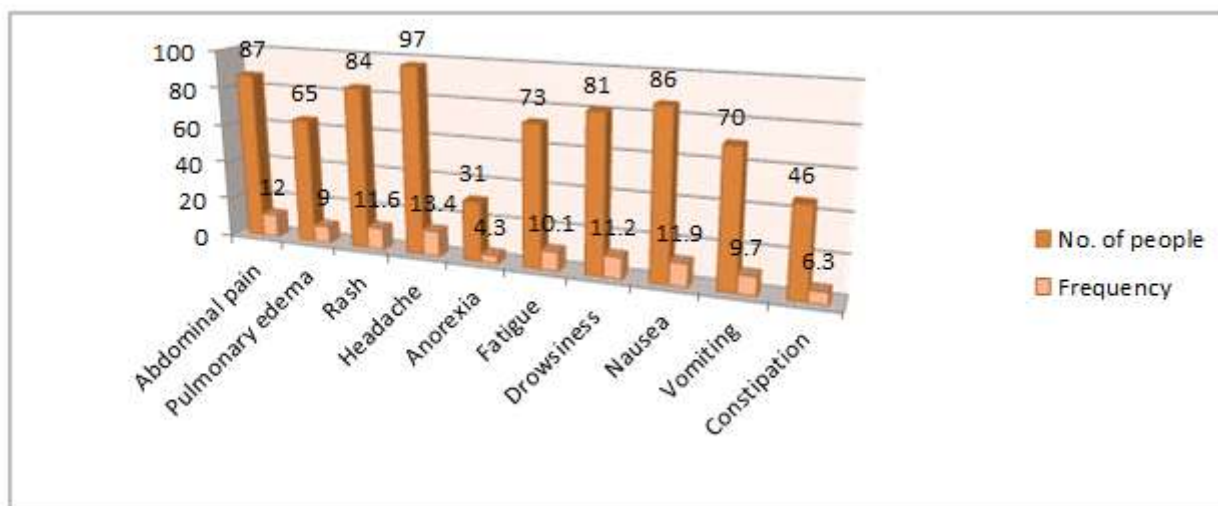
TABLE 6. Shows the ADR's observed with single drugs or multiple drugs with combination given by RMP's.

Adverse drug reactions with poly pharmacy	No. of people	Frequency (%)
Rectal damage	35	4.86
Hepatotoxicity	72	10.00
Hyperkalemia	86	11.94
GI-bleeding	Not seen	0000
Asthma	154	21.38
Porphyria	Not seen	0000
Dehydration	321	44.58
Hypoxia	55	7.63
Hypotension	43	5.97
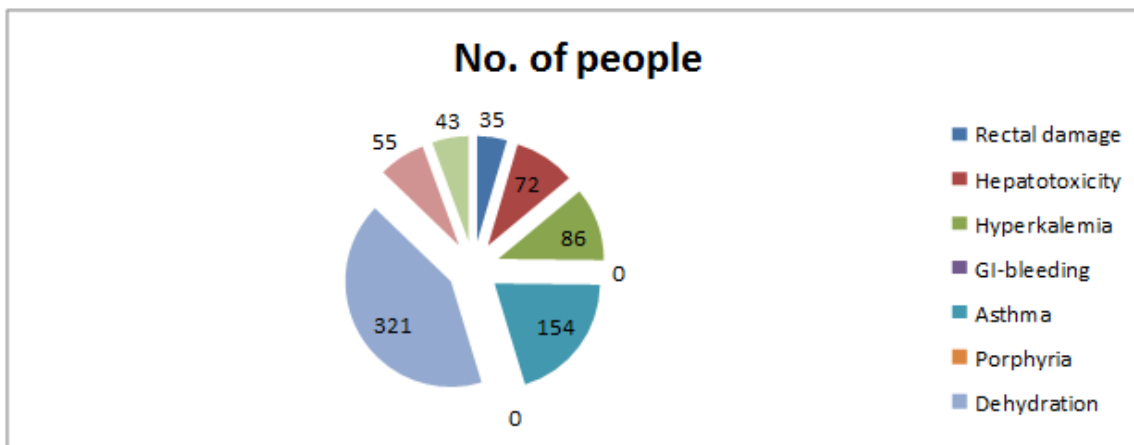
TABLE 7. Shows the ADR's identified by the family members or RMP's after the treatment.

ADR's identified by the family or RMP's

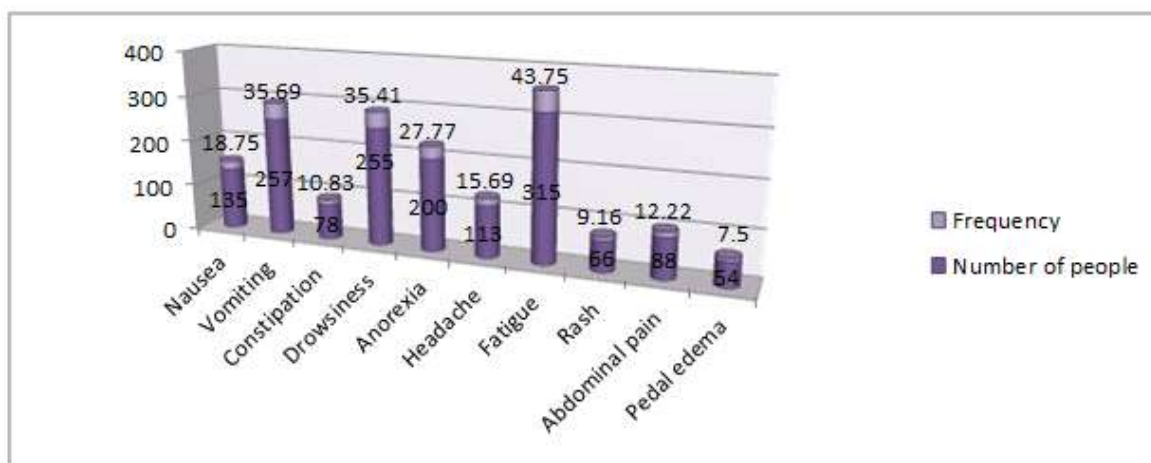| ADR's identified	Number of people	Frequency (%)
Nausea	135	18.75
Vomiting	257	35.69
Constipation	78	10.83
Drowsiness	255	35.41
Anorexia	200	27.77
Headache	113	15.69
Fatigue	315	43.75
Rash	66	9.16
Abdominal pain	88	12.22
Pedal edema	54	7.50

TABLE 8. Shows the ADR's assessment by clinical pharmacist using Naranjo probability scale.

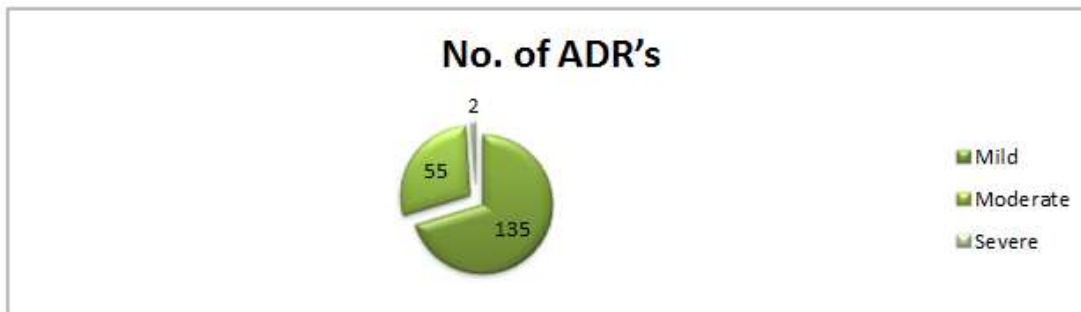| Naranjo probability scale	No. of ADR's	Frequency (%)
Mild	135	72.19
Moderate	55	29.41
Severe	2	10.69

No. of ADR's

TABLE 9. Shows the people consulted the RMP's for adverse drug reactions after the treatment of their symptoms.
Number of ADR's observed for patients consulted RMP

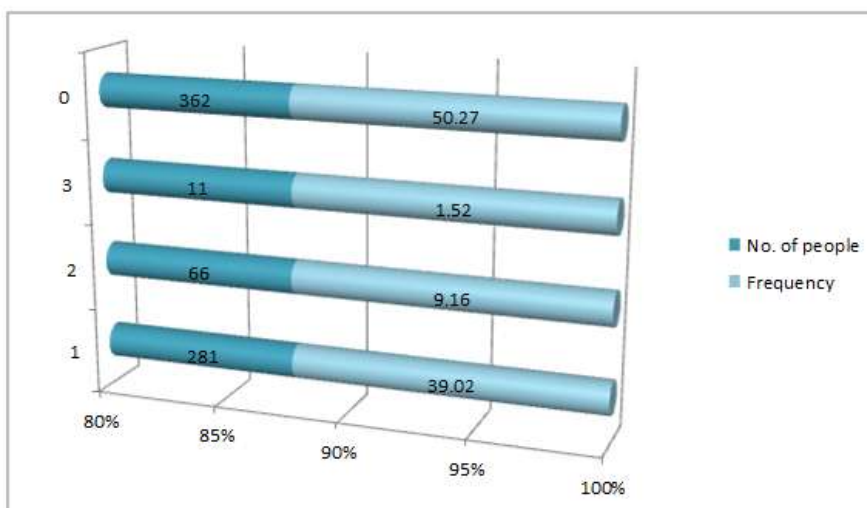| Patients consulted RMP	No. of people	Frequency (%)
1	281	39.02
2	66	9.16
3	11	1.52
0	362	50.27

TABLE 10. Shows the treatment response by the RMP's and advices given to the patients.

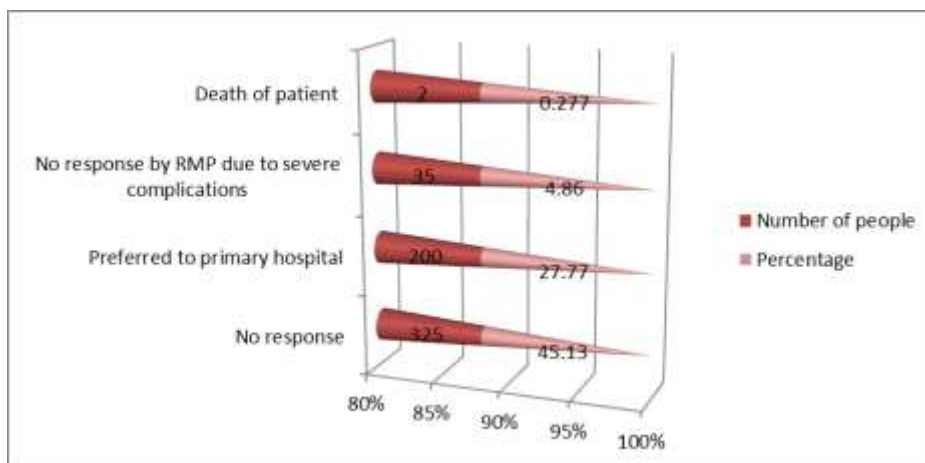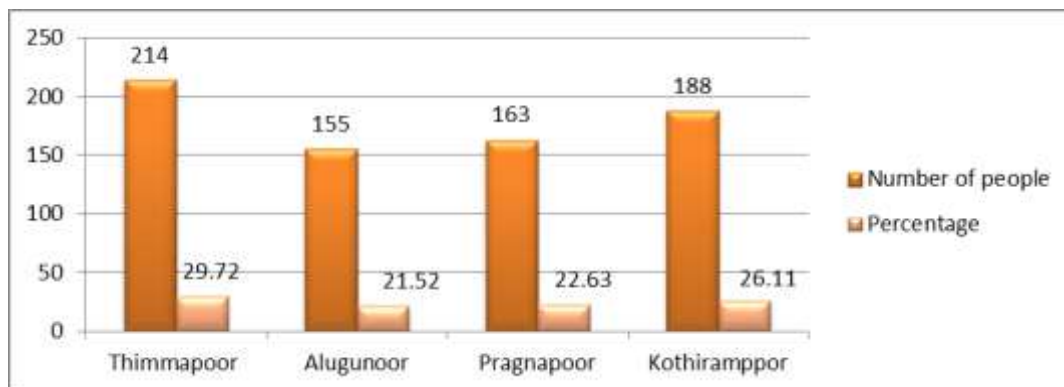| Treatment response by RMP	Number of people	Frequency (%)
No response	325	45.13
Preferred to primary hospital	200	27.77
No response by RMP due to severe complications	35	4.86
Death of patient	2 (no reasons)	0.277

TABLE 11. Shows the places that survey is taken and the people given information are collected by the questionnaire.

Survey area	Number of people	Frequency (%)
Thimmapoor	214	29.72
Alugunoor	155	21.52
Pragnapoor	163	22.63
Kothiramppor	188	26.11

IV. DISCUSSION

Out of 1800 people of rural area only 720 people are willing to give the information out of which the age group 18-60 (100%) of both sexes (100%). In this most of the people are unmarried with educational level of primary and Nutrional status of average and poor with average hygienic conditions and maximum are daily wage labour 420 (58.2%). The main reasons for visiting RMP is fever 706 (98.10%), cold 685 (95%), cough 685 (95%) and skin infections 368 (45%) and the drugs mainly prescribed by RMP's are paracetmol 185 (10.2%) and ranitidine 197 (10.9%). The different classes of drugs prescribed were mainly antibiotics and the people mainly suffered with headache 97 (13.4%) and abdominal pain. Common ADR's observed with single or multiple drugs are mainly dehydration 321 (44.58%), asthma 154 (21.38%) and in which the ADR's identified by family members or RMP are mainly fatigue 315 (43.75%) and vomiting. ADR's assessed by clinical pharmacist using Naranjo scale is mainly mild 135(72.29%). The ADR's after the treatment by RMP is mainly 0 and 1 ADR's, the treatment of RMP is no response is 325 (45.13%) and death of 2 patients and the survey was taken from nearby villages, mainly thimmapoor are more interested to visit to RMP than primary hospitals.

V. CONCLUSIONS

Our study concluded that most of the people in the rural areas mainly consult RMP's due to their low educational and economically backward people. The RMPs prescription contains many ADR's with unknown knowledge about the disease and drugs. It leads to many complications and serious events can takes place by the prescription. As we are the clinical pharmacist we should conduct awareness programs and medical camps and health camps about the life style, health condition, diseases information leaflets to be provided, government should provide health of mainly in villages to overcome the ADR's. Several schemes and measures to be taken and several researches want to take place to reduce the

ADR's and side effects of the drugs prescribed by RMP's with minimal knowledge.

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