

ASSESSMENT OF MOST COMMON INFECTIOUS DISEASES AND MEDICINES PRESCRIBED IN THE HEALTH POSTS OF DHADING DISTRICT

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ABSTRACT

Background: Infectious diseases are the communicable or transmissible diseases which are mainly caused by presence of pathogenic agents like (bacteria, virus, fungi, protozoa) in the individual host. Globally the infectious diseases contribute for 32.3% of total death and in Nepal about 70% health related problems and death are caused by infectious disease. This study was aimed to find out most common infectious diseases and medicines prescribed in its management in the health posts of Dhading district.

Method: A Descriptive Cross-sectional study was conducted in three health posts of Dhading district namely Naubise health post, Bhumesthan health post and Mahadevbesi health post. 450 data were collected from record room of health posts from Shrawan 2077 to Asoj 2077. Patient related and drug related data and information were collected and analyzed.

Results: The most frequent cases were Respiratory Tract Infections (22.22%), Dermatitis (11.55%) and Urinary Tract Infections (11.11%). Majority of cases were in between the age group of 21-30 years (25.11%). The average number of drugs per prescription was 2.37. The percentage of drugs prescribed by generic name and from an essential drug list of Nepal was (73.38%) and (97.46%) respectively. Out of 1067 drugs prescribed, antimicrobials (39.9%) were most commonly prescribed followed by NSAIDs (25.7%), and antihistamine (15.8%). Among antimicrobial, most commonly prescribed was amoxicillin (35.21%) which was followed by ciprofloxacin (16.43%) and azithromycin (14.08%).

Conclusion: This study showed Respiratory Tract Infection was most common infectious disease and Amoxicillin was mostly prescribed drug.

Keywords: *Infectious diseases, health posts, Dhading, antimicrobials, Amoxicillin*

INTRODUCTION

Infectious disease is the communicable or transmissible diseases which are caused by pathogenic biological agents like bacteria, virus, fungi, parasite and protozoa in an individual host.¹ In Nepal, about 70% of health-related problems and death are caused by infectious diseases. Every year many children die from easily preventable and treatable diseases such as diarrhea, dysentery and acute respiratory diseases.¹

Globally the infectious diseases contribute for 32.3% of total death, whereas this is 41.1% for South Asia and 49.7% for Nepal which indicate high prevalence of infectious diseases and parasitic infection.²

Health posts are government healthcare Centre which are a level above sub health post and it helps to provide basic health care facilities, run vaccination, reproductive healthcare programs and others preventive health programs in villages.¹⁰ Health post is provided with 5 number of staffs and 34 essential medicines which are free of cost from the government.⁵ We studied drug prescribing practice in three health post (Naubise health post, Bhumesthan health post and Mahadevbesi health post) by using WHO prescribing core indicators. Naubise health post is situated in Dhunibesi municipality whereas Bhumesthan health post and Mahadevbesi health posts are situated in Thakre Village Development Committee (VDC) of Dhading district. Assessment of the existing prescribing practice in a health care facility helps to identify the specific drug use problems which help in meaningful intervention.⁶ Knowledge on infectious diseases may encourage prevention behavior which may lead to improvement in treatment adherence.⁴

In Nepal, studies related to health post facilities is lacking due to various geographical and physical infrastructure, limited facilities and socio-economic problems.² During past few decades, there has been an extensive focus on improving health care facilities but most of this

activity has been focusing on chronic diseases and there has only been minor focus on patients with infectious diseases.³ Audits from health post are rarely published in medical journal whereas audits from bigger hospitals are common.⁷ The study aimed to find out common cases of infectious diseases encountered in health posts and medicines prescribed in the management of infectious disease which might help in taking necessary precaution against possible risks and improving rational use of drugs.

MATERIAL AND METHODS

Type of study: Quantitative study

Research method: Descriptive cross-sectional study

Research study site: Naubise health post, Bhumesthan health post and Mahadevbesi health post

Sampling method: Non- probability convenience sampling

Sample size: 450 pateints were studied

Criteria for sample selection:

Inclusion criteria: First 50 cases of infectious diseases from Shrawan 2077 to Asoj 2077 from each Health Post

Exclusive criteria: cases of non –infectious diseases

Data collection instrument:

The data collection from (annex) was developed based on WHO guideline format. Required data and inforamtion were noted such as : Name of patients, age ,cases of infectious diseaseas ,main drugs used in management .

Data analysis

All the data and information collected from health posts were coded as per variables and data entry was done in SPSS data sheet and analyzed by the help of statistical software SPSS 16.Data were analyzed as per objectives of the study. The analyzed data were expressed in percentage and bar diagram with help pf Ms Excel 2007.

Study variable

Dependent variables : Cases of infectious diseases and prescribed drugs

Independent variables: Demographic (Age group , gender)

Ethical considerations

The ethical approval was taken from the Institution Review Committee (IRC) of MMIHS. Permission was requested and granted from Director of Naubise health post ,Bhumesthan health post and Mahadevbesi health post to carry on the study.

RESULTS**Age distribution of patients (n=450)**

Out of 450 patients, mostly 21-30 years(25.1%) age group visited the health posts which is followed by the patients of age group 11-20 years (21.3%) and the patients of age group 91-100 years(0.4%) is lower.

Table 1. Age distribution of patients

Age Category (in Years)	Frequency	Percentage
0-10	48	10.7
11-20	96	21.3
21-30	113	25.1
31-40	58	12.9
41-50	41	9.1
51-60	30	6.7
61-70	35	7.8
71-80	19	4.2
81-90	8	1.7
91-100	2	0.4

Gender wise distribution of patients (n=450)

Out of 450 patients, mainly female (62.22%) visited the health posts of Dhading district as compared to male (37.77%).

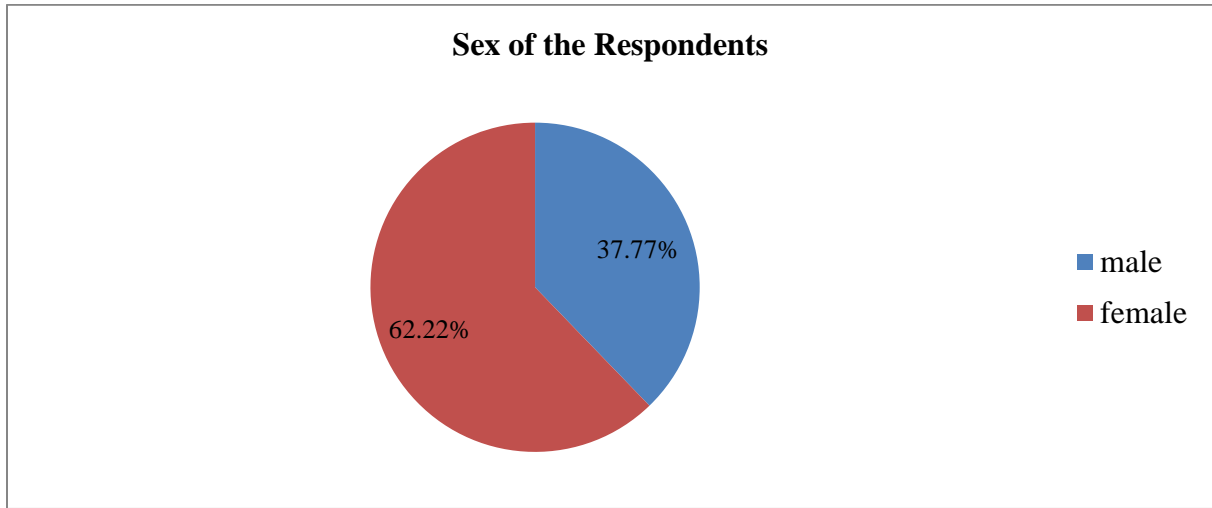


Figure 1: Gender wise distribution of patients

Most common of infectious diseases encountered in health posts of Dhading district.

Total 16 infectious diseases were encounter in health posts of Dhading district. The most common infectious diseases were RTI (22.33%), dermatitis (11.55%), UTI (11.11%) and least was chicken pox (0.8%).

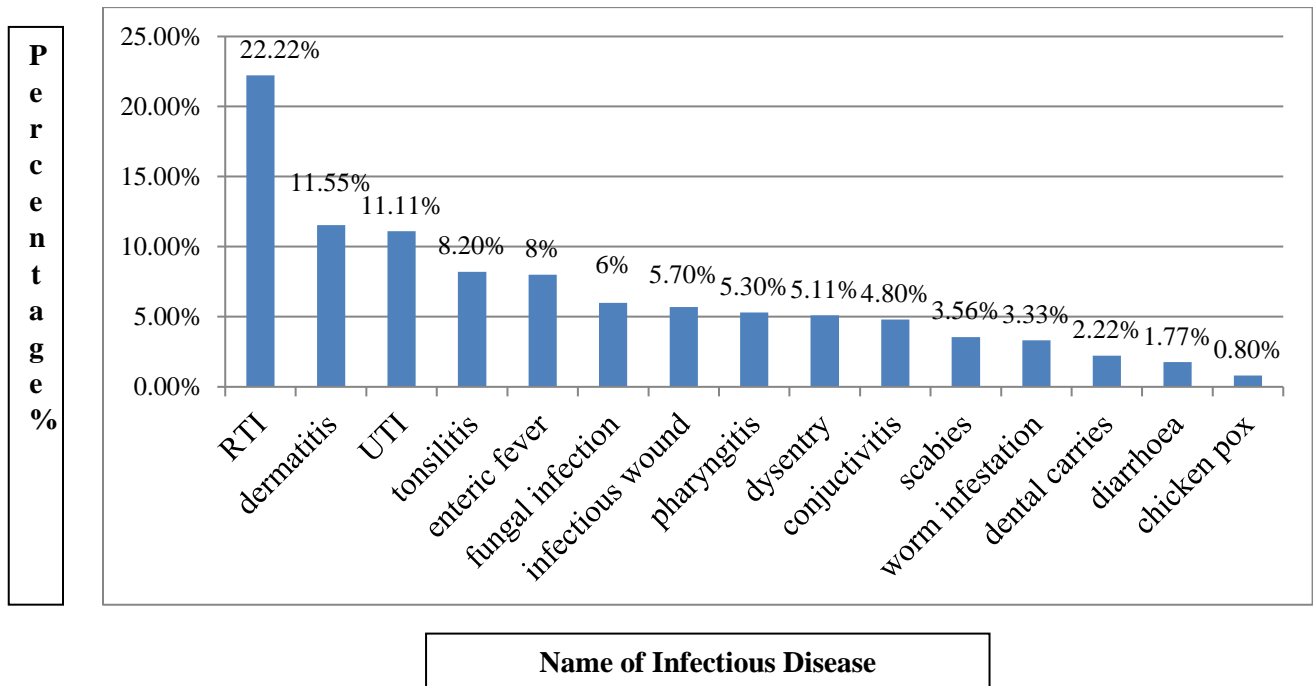


Figure 2: most common cases of infectious diseases in health post of Dhading districts

The most common drugs prescribed in the health posts (n=1067)

Among the total drugs prescribed, antimicrobial drugs (39.90%) were found to be high followed by NSAIDs (26%) and steroid (0.50%) was found to be least prescribed drug.

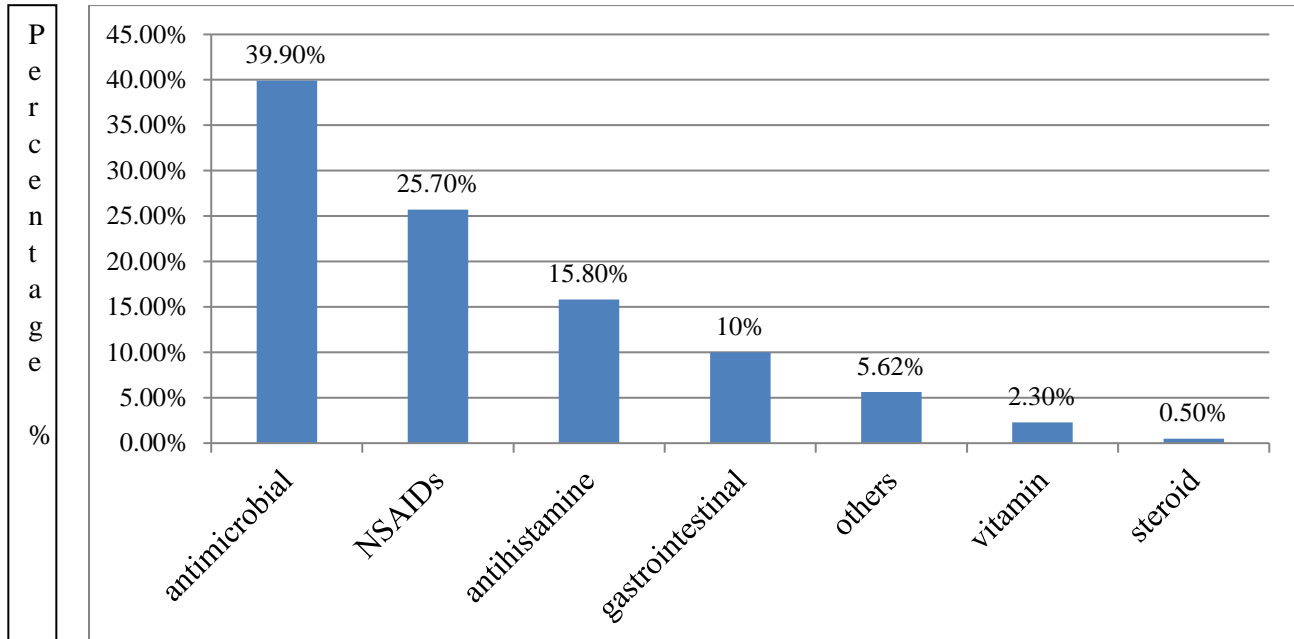


Figure 3: most common drugs prescribed in health posts.

Antimicrobial drugs prescribed in health posts (n=426)

Total 8 antimicrobial were prescribed in the health posts. Among them mostly prescribed was amoxicillin (35.21%) and least prescribed was found to be fluconazole(4.46%).

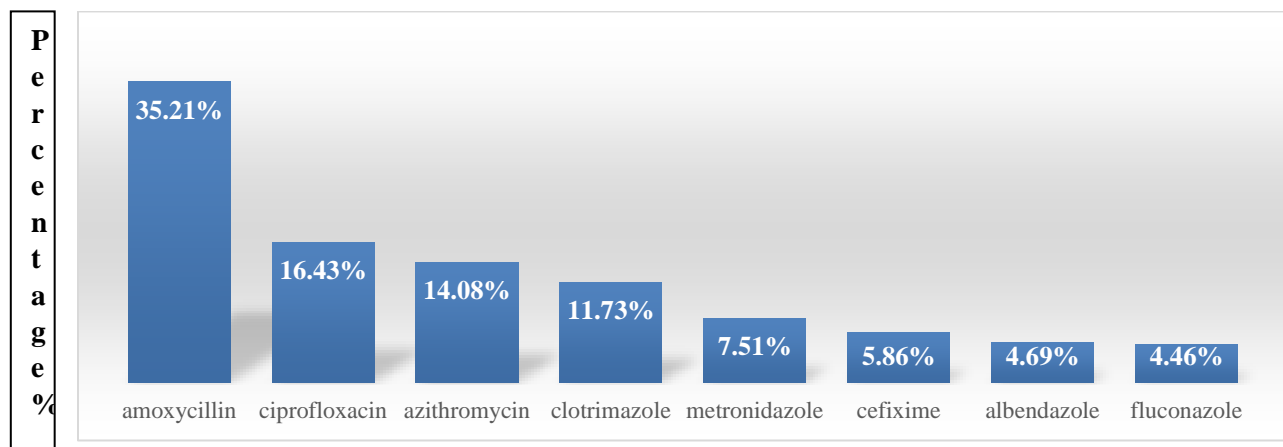


Figure 4: antimicrobial prescribed in the health posts

NSAIDs prescribed in the health post (n=274)

In health posts, two NSAIDs were most commonly used. Among them paracetamol was most commonly used NSAIDs (95.60%) followed by ibuprofen (4.40%).

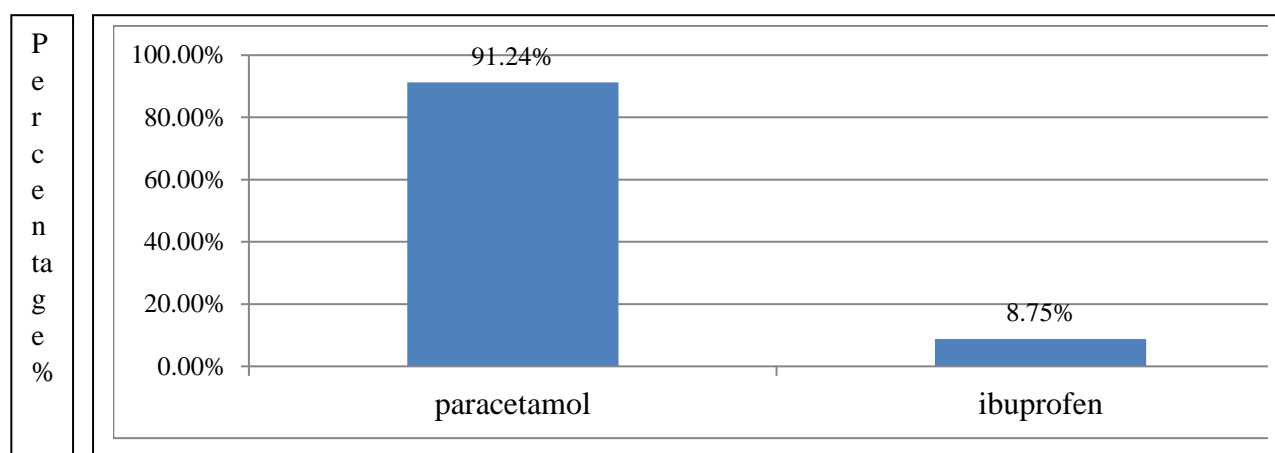


Figure 5: NSAIDs prescribed in health posts

WHO core prescribing indicator

Prescribing indicators	Findings (%)	WHO standard values in health facilities(%)
Average number of drug prescribed per encounter	2.37	1.6-1.8
% of drug prescribed by generic name	73.4	100.0
% of encounter with antibiotic prescribed	88.9	20.0-26.8
% of drug prescribed from EDL	97.5	100.0

DISCUSSION

In our study, patients of age group (21-30) constituted highest number (25.11%) who visited the health posts of Dhading district. According to study carried by Mishra T .et. al showed that (0-10) age group (30.28%)¹ and Palaian S .et al showed that (0-10) age group (25.4%)⁸ visited the

health post and sub health post. Geographical and physical infrastructure and socio-economic profile might have influenced the findings.

Discussing about gender distribution of patients, the results showed 37.77% were male and 62.22% were female. The study conducted by Mishra T. et .al also showed similar result where 42.86% weremale and 57.14% were female.¹

The most common infectious disease was found to be RTI (22.22%) in our study. The study conducted by Mishra T et.al¹ and Ansari et.al⁵ also showed similar results where RTI was found to be(30.57%)¹ and (15.73%)⁵ respectively.This may be because there is a higher chance of infection by various pathogenic micro-organisms in the monsoon season which is also better environment for multiplication of pathogenic micro-organism.

In our study most of the drugs prescribed were antimicrobial (39.99%) and NSAIDs (25.7%). In the study carried by PalaianS.et.al antibiotic were (46%) and NSAIDs were (27.8%).⁸The change of weather and type of diseases prevalent at particular area might have affected the finding.

The average number of drug per encounter was 2.37 which was similar with the results obtained by Dahal et.al where average number of drug per prescription was 2.29² and Mishra T. et.al where average number of drug per prescription was 2.49.¹This may be due to variability in health care delivery system, socio –economic profile ,morbidity and mortality profile of the population. Percentage of drug prescribed by generic name was found to be (73.38%) which was higher than the study done byDahal et.al² and Mishra et .al¹ where the results was only(59.02%) and (20.62%). Increasing generic prescribing may substantially reduce the cost of drugs for the patients and at the same time this study was also conducted in government health facilities where most of the drugs were prescribed in generic name.

In our study of percentage of encounter with antibiotic was found to be (88.88%).In the study conducted by Dahal et.al percentage of encounter with antibiotic was found to be (57%).²Our study was mainly focused on infectious diseases where antibiotics have to be prescribed.

The percentage of drug prescribed from EDL was found to be (97.46%) which was satisfactory and it was more similar to study conducted at health post (94.4%)¹, PHC (89.69%)² and sub

health post (80.64%)⁷. This may be due to that our study was conducted in health posts where government provides free medicines.

CONCLUSION

Thus, from this study, the most common infectious diseases were found to be respiratory tract infection followed by dermatitis and urinary tract infection. The most commonly prescribed drugs were antimicrobial (where amoxicillin was highly prescribed) followed by NSAIDs (paracetamol was highly prescribed).

The average number of drugs per prescription was found to be 2.37 which was higher than WHO standard values for health facilities and this indicates the practices of polypharmacy.

The percentage of drugs prescribed by generic name was 73.38% and percentage of drugs prescribed from EDL was 97.46%.

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Conflict of Interest:

Authors have no any conflict of interest.

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