

**“An overview of Prescription Pattern of Inpatients case study among the Different Specialist Physicians in Dhaka Medical College Hospital “**



**Submitted To**

Department of Pharmacy  
Faculty of Allied Health Sciences  
Daffodil International University

**Submitted By**

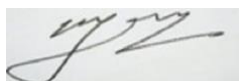
Tasrin Momotaj  
171-29-1073  
Batch: 17<sup>th</sup> C  
Department of Pharmacy  
Faculty of Allied Health Sciences  
Daffodil International University

**Submission Date: 18 th July 2021**

## **APPROVAL**

This project, "An overview of Prescription Pattern of Inpatients case study among the Different Specialist Physicians in Dhaka Medical College Hospital", submitted to the Department of Pharmacy, Faculty of Allied Health Sciences, Daffodil International University, and has been accepted as satisfactory for the partial fulfilment of the requirements for the degree of Bachelor of Pharmacy and has been approved as its style and content.

### **Supervised by**



.....

### **Md. Mizanur Rahman**

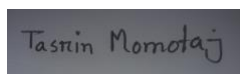
Assistant Professor

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

### **Submitted by**



-----

**Id: 171-29-1073**

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

**BOARD OF EXAMINERS**

-----

**Professor Dr. Muniruddin Ahamed**

Head  
Department of Pharmacy  
Faculty of Allied Health Sciences  
Daffodil International University

-----

**Internal Examiner-1**

-----

**Internal Examiner-2**

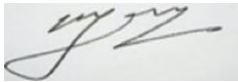
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**External Examiner**

## **Certificate**

This is to certify that the results of the investigation that are embodied in this project are original and have not been submitted before in substance for any degree of this University. The entire present work submitted as a project work for the partial fulfilment of the degree of Bachelor of pharmacy, is based on the result of author's (ID: 171-29-1073) own investigation.

### **Supervised by**



.....  
**Md. Mizanur Rahman**

Assistant Professor

Department of Pharmacy

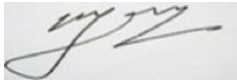
Faculty of Allied Health Sciences

Daffodil International University

## **DECLARATION**

I hereby declare that, this project report is done by me under the supervision of Md. Mizanur Rahman, Assistant Professor, Department of Pharmacy, Faculty of Allied Health Sciences, Daffodil International University, impartial fulfilment of the requirement for the degree of Bachelor of Pharmacy. I am declaring that this project is my original work. I am also declaring that neither this project nor any part thereof has been submitted elsewhere for the award of Bachelor or any degree.

### **Submitted to**



### **Md. Mizanur Rahman**

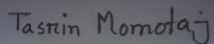
Assistant Professor

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

### **Submitted by**



-----  
**Id: 171-29-1073**

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

**Date of submission: 18.07.2021**



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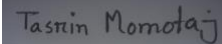
I would like to express my deepest gratitude to Almighty Allah who has given me the ability to complete my project work and give me this opportunity to study in this subject.

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Author

## **DEDICATION**

**To**

**Almighty Allah, My Family & Supervisor**

For their enormous corroboration, for their moderation and genial a for their love



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## ABSTRACT

**Background:** Prescription is mainly a torn of paper of physician's order to the patients for them in curement. Dermatology is a specialty of medicine that focuses on skin conditions and disorders. The objectives were to evaluate, monitor and suggest rational prescribing practices.

**Methods:** This was a three-month cross-sectional study from March to May 2021. The prescriptions were analysed to identify the rationality of antibiotic and dermatological drug use.

**Results:** A total of 30 patients' case were included in the study. All patients are admitted dermatological disease with different complication such as respiratory distress, anemia, chest pain, and hypertension. 80% patients received more than 10 drugs per day. The prescribed drugs are anti-ulcerants, NSAIDs, antihistamine, multivitamin and antibiotic. 90% prescription contain antibiotic and 16.6% contain more than two antibiotics. Only 6.87% prescription doctors prescribe antibiotic in generic name. Most of cases used antibiotics is amoxicillin and manufacturer is Sanofi Bangladesh.

**Conclusion:** The study provided a baseline understanding of the on-going trends in antibiotic prescription among indoor dermatological patients. It emphasizes the importance of establishing antibiotic prescribing guidelines based on the study's high prescribing rates.

**Key words:** Dermatology, Prescription, Antibiotic, Antiulcer, Health care, Physician.

# **CHAPTER 1**

## **INTRODUCTION**

## **1. Introduction:**

Prescription is an authorization to dispense a particular medicine for a particular patient is a formal contact from a doctor or other licensed health care provider to a pharmacist [1]. A prescription is still a sheet of cardboard on which your physician puts a medication list, which you then deliver to a chemist or pharmacist to obtain the medication. Dermatology is a specialty of healthcare that focuses on skin conditions and disorders. It is concerned with the study, investigation, and assessment of normal and anomalous skin. Dermatology includes cancers, aesthetic and aging problems of the skin, fat, hair, nails, and oral and vaginal membranes. Dermatopathology is concerned with the disease of the skin; immunodermatology is concerned with the treatment of impervious skin diseases such as lupus, bullous pemphigoid, as well as pemphigus vulgaris; Mohs surgery is concerned with the deletion of tumours from the skin without injuring normal cells; and neonatal dermatology is concerned with the treatment of dermatopathology is concerned with the treatment of dermatopathology is concerned with the diagnosis of dermatopathology.[2]

Hospital is a nonprofit organization that helps the poor, elderly, infirm, or young. A hospital differs from other healthcare facilities such as a clinic or a doctor's office in that it has beds where patients can stay overnight. Indoor patients are the term for these patients. When someone is ill or hurt, he or she visits to a hospital to be treated. [3]

Hospital is mainly two types: -

- i. Inpatients
- ii. Outpatients

### **1.1. Inpatients:**

Indoor patients defined those patients who are staying in the hospital within a period of time when they received their treatment from a doctor.

Indoor patients are registered with a pointed-out department and a pointed-out doctor. Inpatients may be meant by three things. [4]. These are given below: -

- i) In- Service
- ii) In- Service education
- iii) In- Service training

### **1.1.2. Outpatients:**

On the other hand, Outdoor patients defined with a normal visit at appointed doctors chamber or clinic for aiding an earmarked treatment. Hospitalisations is not required for outdoor patients.

### **1.1.3. Case study:**

A circumstantial cultivation of a tangible matter such as place, event, person, group, organization or phenomenon is referred for a case study.

Case studies are commonly used in social, educational, clinical, and business research. Case studies are good for narrating, balancing, assessing and consideration different perspectives of research problems. Qualitive methods are usually designed for case study research but sometimes quantitative method also be used.

### **1.2. How to do a case study?**

- Select a case
- Build a theoretical framework
- Collect data
- Describe and analyze the case

A common characteristic of the information system discipline is that the bulk of the empirical evidence is embodied in case studies (Alevi & Carlson,1992).[5]

### **1.3. Health care system in Bangladesh:**

Bangladesh has a multilateralism healthcare system, which is immensely unrulred and forms mainly of four key factors :-I. Government, II.For profit private sector, III.Not-for-profit private sector (mainly the nongovernmental organizations ), and IV.The international development organizations.

Although government health care expenditures as a percentage of total government spending fell from 6.2 percent to 4.04 percent in the last eight years, national health policy predicted a significant rise in financial allocation for health care.

People pay for 67 percent of health-care costs, compared to a global average of less than 32 percent.

Only one hospital bed is allotted for 1667 people, and 34% of the population is uninsured. [6]

### **1.4. Disease pattern in Bangladesh:**

Owing to a massive population, Bangladesh features a great fardel of disease: Non-infectious diseases like diabetes, cardiovascular disease, hypertension, stroke, chronic respiratory disease, cancer. Infectious diseases like tuberculosis, HIV, tetanus, malaria, measles, rubella, leprosy.

Health problems grow up, arising from impoverished water nature and outbreak of communicable disease like Malaria and Dengue. Innutrition in Bangladesh has been a static problem for the impoverishment -beaten country.

The World Bank invoices that Bangladesh is ranked 1<sup>st</sup> in the world of the number of children suffering from innutrition. 26% of the population are under weight problem & 43% of children under 5 years old are stupefied in Bangladesh. Vitamin A deficiency noticed among the five preschool age children.

According to UNICEF, in Bangladesh every three to four minutes one new born baby dies,120000 new born baby dies every year.

From the list of disease pattern of Bangladesh it is notify that due to great population, illiteration, innutrition of Bangladesh suffers various communicable disease rather than health problems. In recent decades, Bangladesh has seen a significant decrease in the number of children. dying from diarrhoea.

This looks at the preventive, promotional, curative, and contextual factors that contributed to Bangladesh's remarkable achievement.[7]

Based therapies should be scaled up at universal coverage to keep the momentum going.

## **1.5 Prescription pattern in Bangladesh :**

Prescription Patterns explain the extent and profile of drug use, trends, quality of drugs, and compliance with regional, state or national guidelines like standard treatment guidelines, usage of drugs from essential medicine list and use of generic drugs.

Prescription pattern monitoring studies (PPMS) are a tool for assessing the prescribing, dispensing and distribution of medicines.

The entire number of registered medical practitioners and doctors in Bangladesh is 44225,thus providing one doctor for every 3278 patients (WHO,2011).So 3.05 doctors for each 10.000 population and 1.07 nurses.

Sixty-six individuals (76.7%) relapsed after the procedure was done by a workflow process, like the one utilized in this study, can aid in the identification of impediments that contribute to prescription abandonment. [8]

The pharmacy learned from this process that training all employees on the workflow can help to expand interventions to reduce prescription abandonment and improve medication adherence.

## **1.6 Standard prescribing indicators :**

Medication mistake is a leading cause of patient morbidity and mortality, and it's linked to a lack of patient safety measures.

However, there are no prescribing-safety technologies intended expressly for use in general practice.



These factors include risky prescribing for a variety of therapeutic purposes, risky drug-drug combinations, and insufficient lab test monitoring.

The World Health Organization has developed standardized prescription criteria to assess prescribing practices in health facilities (WHO).[9]

I.The number of drugs prescribed per encounter is one of them.

II.The percentage of medications given by brand name (%).

III.The percentage (%) of antibiotics and injectable medicines used each encounter, as well as

IV.The percentage (%) of drugs recommended by a physician.

To create and update a set of prescribing safety indicators for evaluating prescription safety in general practice, as well as to quantify the risk of patient harm associated with each sign.

### **1.7 Hospital pattern in Bangladesh :**

Bangladesh is one of 57 nations having a serious health staff deficit. [10]

Because there is no established referral system, patients choose the most convenient practitioner.

There are two types of private-sector health-care providers: organized and informal.

There are many special department for special case & they are:-

- General & Laparoscopic Surgery.
- Medicine
- Dermatology
- MRD SERVICES.
- Orthopedics, Arthroscopy & Joint Replacement.
- Colorectal Surgery.
- Corporate Affairs Department.
- EMERGENCY.
- Pediatric Surgery.
- Health Check Up.
- Covid 19

#### **1.7.1 Medicine Department :**

Comparative medicine is a field of study that connects and exploits biological similarities and differences among animal species in order to better understand disease mechanisms in humans and animals. [11]

It's also been described as a branch of study that focuses on the parallels and distinctions between human and veterinary medicine, and it's becoming increasingly linked to animal models of humour.

In medicine department fever, headache, cold such kind of normal diseases are treated.

### 1.7.2 Dermatology Department :

Dermatology is a discipline of medicine that deals with skin issues. It's a specialty that includes both medical and surgical elements.

A dermatologist is a medical professional who treats disorders of the skin, hair, and nails, as well as some aesthetic issues.[12]

Significant diseases of dermatology	Skin cancer, <u>Skin infections</u> , <u>eczemas</u> <u>burn</u>
Significant tests	<u>Skin biopsy</u>

### 1.7.3 Dermatologists offer the following treatments:

- Skin cancer excision and therapy
- Warts, skin malignancies, and other dermatoses can all be treated using cryosurgery.
- Injections of cosmetic fillers
- Chemotherapy or steroid medications are given intralesionally.
- Birth markings, skin problems (such as vitiligo), tattoo removal, and cosmetic resurfacing and rejuvenation are all treated with laser therapy.
- Peels with chemicals
- Skin cancer and precancerous growths are treated with photodynamic therapy
- Narrowband UVB, broadband UVB, psoralen, and UVB phototherapy are all examples of phototherapy.
- Liposuction in a tumescent state
- A dermatologist (Dr. Jeffrey A. Klein) modified the treatment to local infusion of dilute anesthetic called tumescent liposuction, which was invented by a gynecologist.
- Dermatologists, plastic surgeons, and gynecologists are all using this procedure presently.
- Despite the fact that dermatologists rarely use radiation therapy, some nevertheless do so in their offices.
- Autologous melanocyte transplant, suction blister grafting, and punch grafting are all methods used to treat vitiligo.
- "patch" is a technique used in allergy testing.

The Anatomical Therapeutic Chemical (ATC) categorization system, specifically the ATC code D, can be used to describe most dermatologic pharmacology.[13]

## **1.8 Rational use of Drugs:**

Making a (differential) diagnosis, evaluating prognosis, creating therapeutic goals, selecting the best appropriate treatment, and monitoring the results of that treatment are all examples of rational prescription.

Patients receive pharmaceuticals suited to their clinical needs, in doses that fit their own specific requirements, for an adequate duration of time, and at the lowest cost to them and their community, according to rational medicine use.

This research intends to describe initiatives to explain the use of methylphenidate and its limitations, taking into account the idea of societal pharmaceuticalization.

It's a preliminary research project based on a narrative review of the scientific literature.

Methylphenidate is a good illustration of this because of the controversy surrounding its use.

Promoting of rational use of drugs in following ways-

- Clinical recommendations are used.
- The creation of a multidisciplinary national agency to coordinate policy on the use of medicines.
- The creation and implementation of a national essential medicines list.
- Drug and therapeutics committees are being established in districts and hospitals.

Ensure that health professionals and consumers use medications in a therapeutically sound and cost-effective manner.[14]

### **1.8.1 Steps of rational drug use:**

- Based on recognise action and symptoms patient problems identified
- Disease diagnosis
- Drugs identified
- With the particular and complete prescription treatment started [15]

### **1.8.2 Irrational use of Drugs:**

Irrational use of drugs mainly meant by polypharmacy (use of too many medicine at time per patient).

More than half of all drugs are prescribed, delivered, or sold incorrectly, according to the WHO, and half of all patients do not take them correctly.

Overuse, underuse, or misuse of drugs wastes valuable resources and puts people's health at risk. From a medical standpoint, inappropriate medication use can start at any of the four main stages of the medicines use cycle .[16]

Diagnosis, prescription, dispensing, and patient compliance are the four stages of treatment.

### **1.8.3 Impact of inappropriate use of drugs:**

- i.Reduced quality and therapy: morbidity, mortality
- ii.Waste of resources : reduced availability, increased cost
- iii.Risk of unwanted effects: adverse reactions,bacterial resistance
- iv.Psycho-social impacts: patients rely on unnecessary drugs.

### **1.8.4 Reasons for irrational use of drugs :**

- Deficiency of information
- Teachers or seniors role model
- Diagnosis facilities deficiency
- Patients demand
- Patients Gravity
- Pharmaceutical companies activities on promoting
- Drug Promoting
- Defect of Drug supplying [17]

### **1.8.5 Is drug use rational or irrational?**

The use of medicines in an irrational manner is a worldwide phenomenon.

Patients receive pharmaceuticals suited to their clinical needs, in doses that satisfy their own specific requirements, for an adequate duration of time, and at the lowest cost to them and their community, as described by rational drug use.

Many other times Irrational drug doesn't fulfil clinical needs on the rather rational drugs fulfil clinical needs. Rational use of drugs mean appropriate use of drug on the other hand irrational use of drug does not maintain perfection use of drug.

Medicines are an important aspect of the medical system.[18]

Irrational drug use is a big problem in many health-care systems across the world.

Such behaviors are likely to result in subpar health care, putting patients at risk and wasting valuable resources that could be utilized to address other critical health issues.

## **1.9 Antibiotics :**

Antibiotics are antibiotics that are used to treat bacterial infections.

Antibiotics are potent drugs that combat infections and, when taken correctly, can save lives. They either prevent bacteria from multiplying or kill them.

They accomplish this by either killing the bacteria or preventing them from replicating or copying themselves.

Antibiotic is a word that implies "against life." An antibiotic is a medication that kills microorganisms in the body. Antibiotic medication discovery is regarded as one of the most significant medical breakthroughs of the preceding century.[19]

Each year, proper antibiotic usage saves millions of lives and prevents infection problem in a large number of people.

Infections continue to kill far too many people around the world, even in wealthy countries where most antibiotics are readily available.

Antibiotic use is based on the identification of primary and secondary foci of knowledge of which microorganisms to expect in a particular infectious condition and information on regional antibiotic resistance patterns.

In addition, there are several factors involved in antibiotic therapy of infectious diseases, including sampling for microbiological analysis, knowledge of the patient's immune status and organ functions, travel history, pharmacokinetics and -dynamics of different antibiotics, and possible biofilm formation. [20]

The parameters that should be considered when determining the best usage of antibiotics to treat illnesses, resulting in the most appropriate antibiotic therapy for that particular patient.

### **1.9.1 Types of antibiotic :**

- Penicillin's such as penicillin and amoxicillin.
- Cephalosporin's such as cephalexin (Keflex)
- Macrolides such as erythromycin (E-Mycin), clarithromycin (Biaxin), and azithromycin (Zithromax)
- Fluoroquinolones such as ciprofloxacin (Cipro), levofloxacin (Levaquin), and ofloxacin (Floxin) [21]

### **1.9.2 Mechanism of action of antibiotic :**

They have a highly reactive three-carbon and one-nitrogen ring.

Antibiotics hinder the synthesis of the bacterial cell wall by inhibiting the necessary protein function required for this function, killing or inhibiting bacterial growth.

## Antibiotic Action on Bacterial Cells: Five Basic Mechanisms:[22]

- Cell Wall Synthesis Inhibition
- Protein Synthesis Inhibition (Translation)
- Membrane Changes in Cells
- Nucleic Acid Synthesis Inhibition
- Antimetabolite Activity is a term used to describe the ability of a substance

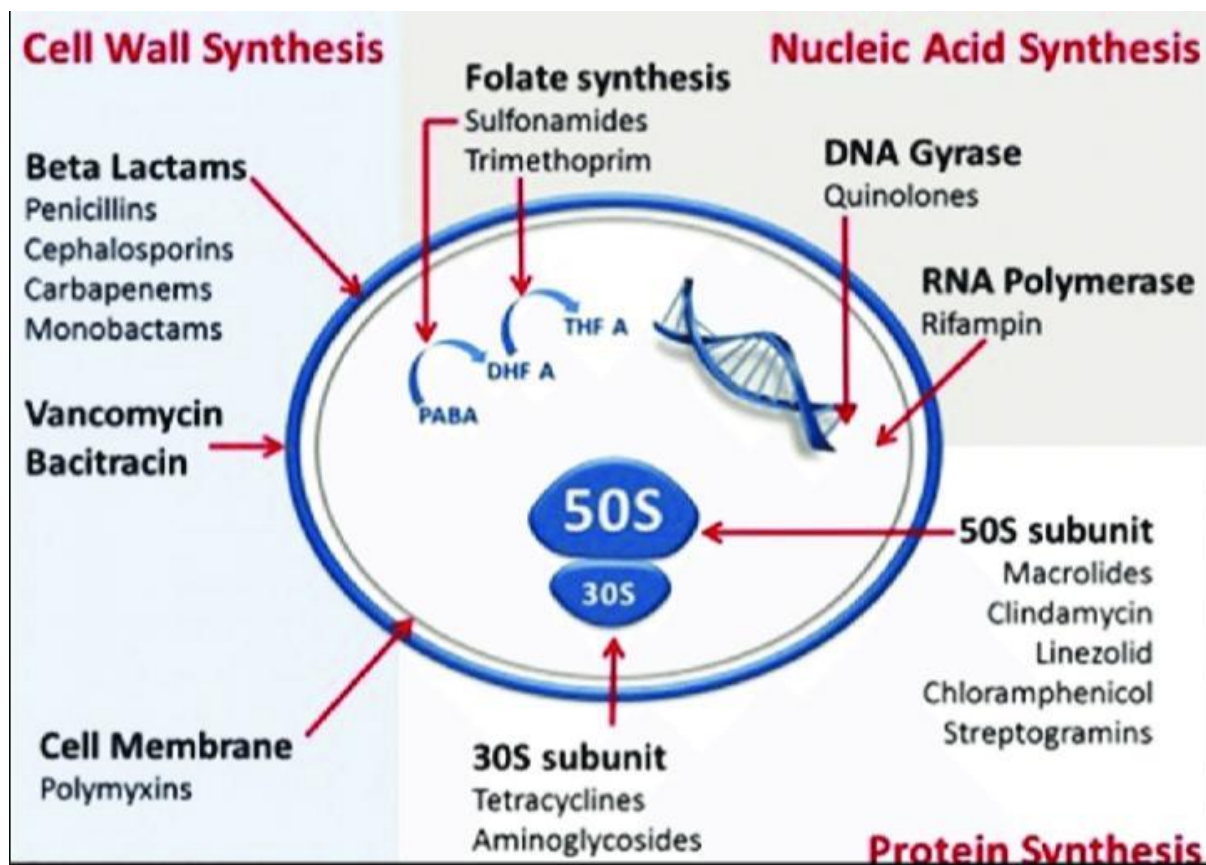


Figure :1 Mechanism of Antibiotic [23]

### 1.9.3 Antibiotic Resistance :

Antibiotic biosynthesis and antibiotic producers' self-protection mechanisms are both important components of the developing antibiotic resistance issue. [24]

Antibiotic resistance genes identified in human diseases can be traced back to ancient microbial manufacturers of antibiotics in natural settings.

There will also be case studies of synergistic antibiotic combinations, adjuvants, and hybrid antibiotics.

#### **1.9.4 The role of antibiotic and antibiotic resistance in nature:**

Antibiotics are drugs that are used to treat or prevent bacterial infections.

They don't work against viral infections like the common cold or the flu.

Antibiotic resistance in the context of the environment shed new insight on an issue that was previously thought to be limited to a subgroup of clinically relevant antibiotic-resistant bacterial pathogens.

According to the study, environmental microbiome has a large number and diversity of antibiotic resistance genes.

Understanding the complicated picture of antibiotic evolution and ecology, as well as antibiotic resistance, may aid in understanding the processes that contribute to resistance.[25]

They either prevent bacteria from multiplying or kill them. The immune system can usually eliminate bacteria before they grow and produce symptoms.

#### **1.9.5 Rational use of antibiotic :**

Antibiotics should be used rationally, just like any other therapeutic intervention in daily practice, and not at random.

It necessitates thought and reflection, and it should be based on rules

Antibiotic rational use encompasses not only providers' actions in ensuring patients receive appropriate treatment for their condition, at the right dose and duration, but also patients' actions in following the treatment regimens prescribed, completing the full course, and not sharing or storing antibiotics.



**Figure : 2 Rational use of Drugs [26]**

Antibiotics are prescribed by more than 44% of doctors before a cold or fever is diagnosed.

Only 6.3 percent of patients seek medical help if they miss an antibiotic dose.[27]

Antibiotic-resistant bacteria can be selected and transmitted in a variety of ways as a result of this.

### **1.9.6 Irrational use of Antibiotic :**

Antibiotic resistance is one of Bangladesh's most well-known public health issues.

The purpose of this study was to investigate the current state of irrational antibiotic use in rural Bangladesh, as well as physicians' and patients' perspectives.

Antibiotic overuse is a major public health hazard around the world, particularly in developing nations like Ghana, where pharmaceutical control is lax.

Unfortunately, this issue has been reduced to the fear of the development of resistance organisms and the destruction of the world's restricted spectrum of antibiotics therapy at the expense of other, more subtle concerns such as metabolic and atopic illnesses. These dangers, on the other hand, appear to have a higher impact on developing countries' public health systems. Antibiotic overuse is a complicated problem. [28]

Antibiotic resistance is one of Bangladesh's most well-known public health issues.



The source of the problem can be located not just in hospitals, but also in many other areas of the community.

As a result, antimicrobial resistance poses a threat to people and society.

### 1.9.7 National policies for using of antibiotic :

Antibiotic usage has been regulated in many nations through various regulations and measures.

According to Dr. Jurgen Schulte, international cooperation is a factor that can play a significant role in the fight against antimicrobial resistance.

Some national policies have been effective in this regard, while others have not, and for some it is yet too early to pass judgment because they are still in the early stages of implementation.

However, if countries fail to account for the cross-border impacts of their activities, many national policies may not be ideal from a global perspective (Smith and Coast, 2002). [29]

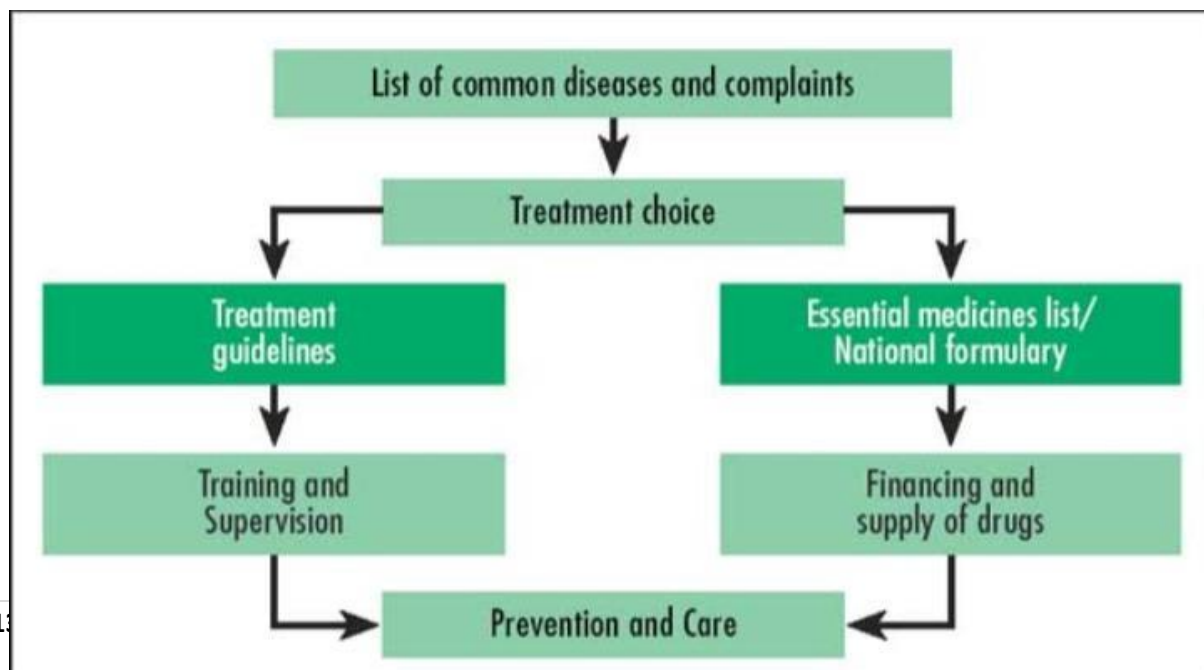
As a result, in addition to national measures, international collaboration can play a key role in the fight against antimicrobial resistance.

### 1.10 Essential Drugs and Medicines:

The World Health Organization defines essential drugs as those that “satisfy the population’s priority health care needs.”

These are the medications to which people should have constant and adequate access. Prices should be within reach of the majority of people. Essential drugs are those that meet the population’s most pressing healthcare needs. [30]

They are chosen based on disease prevalence, efficacy and safety evidence, and comparative cost-



effectiveness.

## **Figure : 3 Essential Drugs [31]**

### **1.10.1 Essential medicines criteria :**

- Pain relievers and palliative care medications.
- Medical gases, anaesthetics, and preoperative medications
- Antihistamines and anaphylaxis medications.
- In poisonings, antidotes and other chemicals are utilized.
- Anticonvulsants/antiepileptic.
- Antibiotics are antibiotics that are used to treat infections.
- Anti-migraine drugs.
- Antineoplastics and immunomodulators [32]

### **1.10.2 Model of indoor patients essential drugs and medicine:**

- Paracetamol
- Amoxicillin Artesunate-Amodiaquine
- Metronidazole
- Ceftriaxone injection
- Multivitamins
- Ciprofloxacin
- Dextrose saline infusion
- Nifedipine
- Glibenclamide
- Diclofenac
- Normal saline infusion
- Ringers lactate infusion
- Dextrose 5% infusion
- Quinine
- Buscopan

Primarily above drugs are most probably prescribed to the indoor patients in every hospital. For my survey of study I choose Dhaka Medical College Hospital. About 3 months of study among the admitted patients I have found the above medicine in most of the patients.

## **CHAPTER 2**

### **OBJECTIVE**

## **2.1 Objective of the study:**

The objective of this study was patients are admitted with any diseases and assess the inpatient usage of antibiotics & also other medicines in teaching hospitals in Dhaka, Bangladesh.

### **2.1.1 General Objective :**

Understanding the prescription pattern of indoor dermatological patients and the usage of different class of antibiotics and others medicine.

### **2.1.2 Specific objective :**

- To find out which gender are more affected that's admitted in the hospital
- To identify People of any age are more vulnerable admitted in the hospital
- To find out their complications when they admitted
- To find out patients administer and diagnosis
- To find out how much antibiotics are prescribed
- To find out the more prescribed pharmaceutical companies

## **CHAPTER 3**

### **METHOD & MATERIALS**

### **3.1 Methods :**

The methods used are a collaborative approach to the dissemination of information RX in the National Library of Medicine, physician instruction, patient and provider workstation placement and integration practices.

#### **3.1.1 Study Design :**

Cross-Sectional study

#### **3.1.2 Study period:**

3 months(March 2021 -May 2021)

### **3.2 Study procedure:**

For this survey of case study I follow the following criteria :-

#### **3.2.1 Population:**

For this case study prescriptions were randomly collected by Dhaka Medical College hospital patients (Dhaka district, in Bangladesh) prescribed by physicians or registered medical practitioners. Where there were different types of patients, indoor patients were given more importance and they were considered as main target sample. At intervals of about 3 months 30 prescriptions were collected, average 3 each per day, from March to May 2021 from Medicine & Dermatology department. With

the help of physician doctors and also patients specific data is collected from each prescription such as their age, gender, place of residence, type of disease and what type of medicine they were prescribed. And all information was used for study purposes and kept confidential.

### **3.2.2 Selection of the area:**

Due to Covid 19 situations and time supress,Dhaka city was selected as the study region. Dhaka Medical College Hospital's indoor patients prescriptions were collected in this survey.

### **3.2.3 Term of survey :**

Term of survey was 3 months initiating from March 2021 to May 2021. To complete the survey on time, a work scheme was created based on the study's various motives One month was exhausted on topic discrimination protocol uplift. The remaining months were spent on official consistence,data requitment,data exploration and report composing.

### **3.2.4 Inclusion Criteria:**

In my survey of study both young and geriatric patients who are dermatology and medicine department patients are included and the prescriptions that holds cabalistic impression on  
Age of Patients : 18 years to old aged  
Sex of Patients :Both male and female  
Physicians : Having particulization on any discipline  
Area : Dhaka  
Particularly on the number of medicines like NSAIDs,Antiulcers,Antibiotics prescribing recurrence have been added.

### **3.2.5 Exclusion Criteria :**

In my survey of study new born baby, neonates and below the age of 18 years were not included. Except of dermatology and medicine department patients and those patients who were not stay at least one night were not counted in my survey.  
The patients who were unwilling to participate were excluded from this survey.

### **3.3 Statistical Analysis :**

All prescription data is first given to Microsoft excel input so that all data is stored systematically. And then Statistical analysis was performed using the programs available in the SPSS statistics package.

## CHAPTER 4



# RESULT & DISCUSSION

## 4. Results :

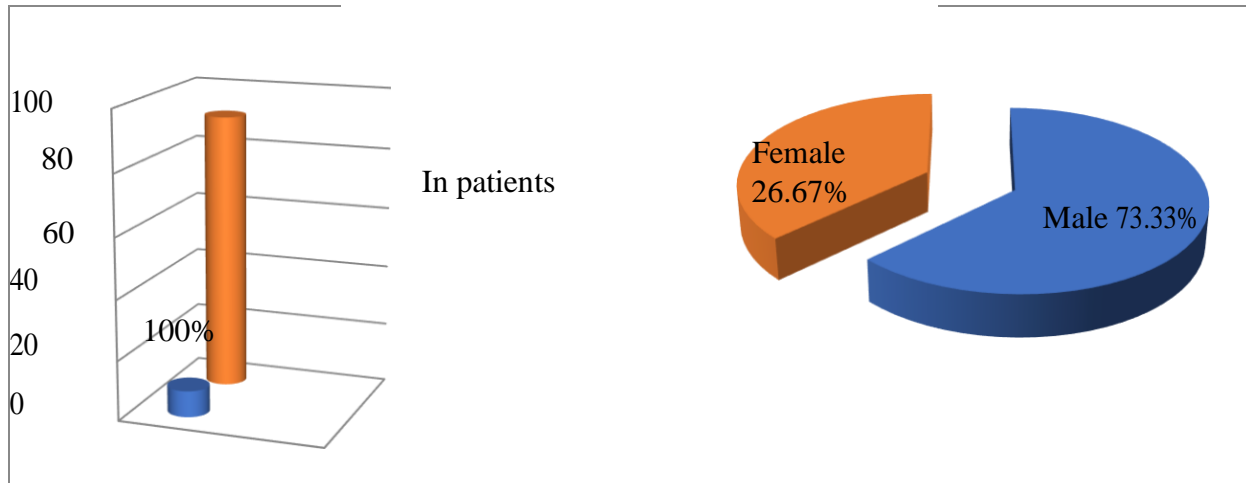
The prescription pattern of inpatients was found in this survey which are prescribed from Dhaka Medical College and Hospital. Total number of 30 medical case studies were accumulated, anatomized and exploration for medicine prescription over period of 3 months. Out of 30 inpatients, 22(73.33%) were male and 8(26.67%) were female(excluding children) are found in Table 1.



### 1. Tabular representation of demographic data of patients :

Gender of patients	Patients types
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Gender	No. of patients	%	Types of Patients	No. of patients	%
Male	22	73.33		00	00
Female	8	26.67	In patients	30	100



**Figure 4 : Percentages in- patients & male-female data of total prescription**

From the entire 30 prescriptions I have raised that,4(13.33%) were average 18-30 ages people , 16(53.33%) were average 31-45 ages people, 8(26.67%) were average 46-70 ages people and only 2(6.67%) were old ages people are found in Table 2.

**2. Tabular representation of demographic data of patients age:**

SL NO	Age	No of Patients	%
1	18-30	4	13.33
2	31-45	16	53.33
3	46-70	8	26.67
4	More than 70	2	6.67

#### 4.1 Exploring the prescriptions:

From the following Table 3 I have shown about 30 inpatients Blood Pressure (BP) where 18(60%) were low, 8(26.67) were normal and 4(13.33) were High BP patients.

**Table :3 Tabular representation of demographic data of patients Blood Pressure :**

SL NO	Pressure	No of patients	%
1	Low	18	60
2	Normal	8	26.67
3	High	4	13.33

Among the entire 30 inpatients case study I have found patient problems 8(26.67%) were faced chest pain,12(40%) were faced abdominal pain, 7(23.33%) were faced respiratory distress rather than breathlessness ,10(33.33%) were faced hypertension, 9(30%) were faced anaemia, 10(33.33%) were faced other difficulties which has represented at Table 4.

**Table :4 Proportion of prescription case studies containing patients problems :**

<b>SL No</b>	<b>Problems</b>	<b>No of Patients</b>	<b>%</b>
<b>1</b>	Chest Pain	8	26.67
<b>2</b>	Abdominal Pain	12	40.00
<b>3</b>	Respiratory Distress	7	23.33
<b>4</b>	Hypertension	10	33.33
<b>5</b>	Anemia	9	30.00
<b>6</b>	Others	10	33.33

15(50%) were diagnosed by CBC-ESR, 5(16.67%) were diagnosed by albumin test, 7(23.33%) were diagnosed by serum creatinine test, 9(30%) were diagnosed serum electrolyte test, 10(33.33%) were diagnosed by chest X-ray and 6(20%) were diagnosed by others test which were collected from Dhaka Medical College Hospital 30 inpatients case studies and represented at Table 5.

**Table :5 Tabular representation of Diagnostic test:**

SL NO	Test Name	No of Patients	%
1	CBC-ESR	15	50.00
2	Albumin test	5	16.67
3	Creatinine test	7	23.33
4	Electrolyte test	9	30.00
5	Chest X-Rey	10	33.33
6	Others	6	20.00

It was found about 30 inpatients case studies, physicians, doctors adviced 7(23.33%) dieted liquid, 10(33.33%) dieted normal, 5(16.67%) dieted high protein, 6(20%) needed nebulization, 7(23.33%) dieted others food diet are found in Table 6.

**Table: 6 Tabular representation of patients advice :**

SL NO	Advice	No of Patients	%
1	Liquid	7	23.33
2	Normal	10	33.33
3	High Protein	5	16.67
4	Nebulization	6	20.00
5	Others	7	23.33

Among those 3 months observations of inpatients case study 17(56.67%) were stayed about 2 weeks, 10(33.33%) were stayed about 1 months and 3(10%) were stayed over 1 months which are found in Table 7.

**Table : 7 Tabular representations of duration of treatment :**

SL no	Days	No of Patients	%
1	1—14	17	56.67
2	15-28	10	33.33
3	Over 1 month	3	10.00

Among the 30 gained prescriptions lower 9 drugs contain 6(20%) prescriptions, upper 9 and below 13 drugs contain 8(26.67%) prescriptions, 13 to 15 drugs contain 5(16.67%) prescriptions, 16 to 18 drugs

contain 7(23.33%) prescriptions and 19 to 20 drugs contain 4(13.33%) prescriptions which are placed in Table 8.

**Table :8 Number of Medicines prescribed per prescription :**

<b>Prescription containing number of drugs</b>	<b>Number of prescriptions</b>	<b>%</b>
7-9	6	20.00
10-12	8	26.67
13-15	5	16.67
16-18	7	23.33
19-20	4	13.33

It was audited that the medication for all these common contagious entangle group of drugs that were prescribed were Antiulcerants 10(33.33%), NSAIDS 21(73.33%), Multivitamin & Multimineral 15(50%), Antihistamines 8(26.67%), Pain killers 8(26.67%). The five most used group of drugs are represents in table 9.



**Table : 9 Five most commonly prescribed group of drugs :**

<b>Diagnosis</b>	<b>Number of cases N = 30</b>	<b>(%)</b>
Antiulcerants	10	33.33
NSAIDs	21	73.33
Multivitamins & Multimineral	15	50.00
Antihistamines	8	26.67
Pain killer	8	26.67

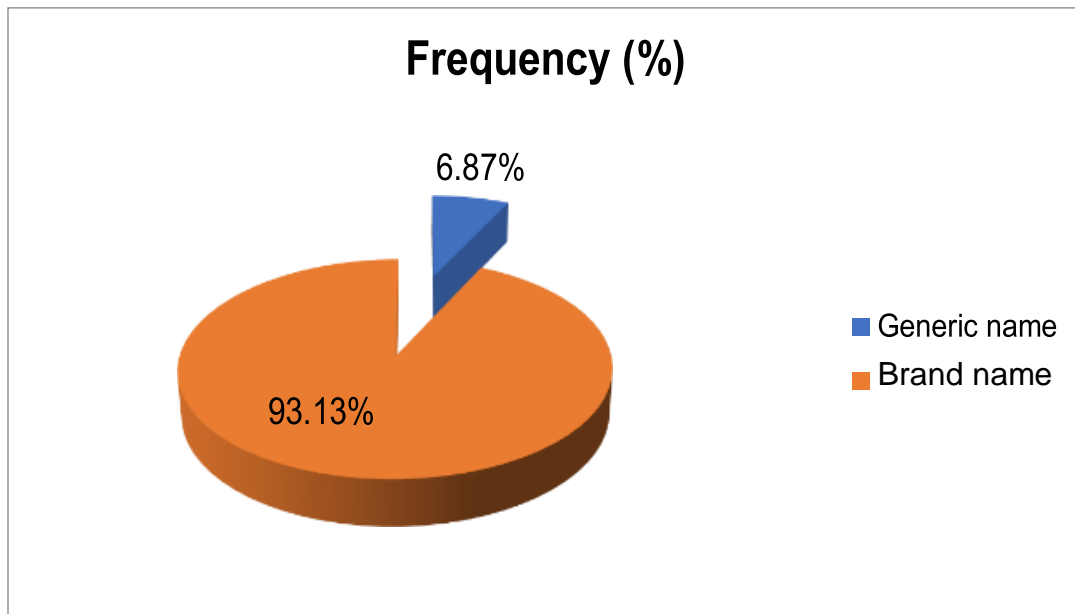
Among the 30 audited prescriptions 27 prescriptions containing antibiotics. From this analysis I have found 15(50%) prescriptions contained single antibiotic drug, 8(26.67%) prescriptions contained double antibiotic drug and 4(16.67%) prescriptions contained more than two antibiotic drug which are shown in Table 10.

**Table : 10 Number of antibiotics prescribed per prescription :**

<b>Prescription containing number of drugs</b>	<b>Number of prescriptions</b>	<b>%</b>
One	15	50.00
Two	8	26.67
More than two	4	16.67

## 4.2 Generic name vs. brand name :

In the below Figure 5 it was shown that drugs are mainly proposed by their brand names and from 30 antibiotics found that as most of our physicians mentioned the brand name (93.13%) instead of the generic name (6.87%) while prescribing antibiotics.



**Figure 5: Percentage of prescription declaring brand name or the generic name of drugs**

In the Table 11 We have found the percentage of generic name of drugs where Paracetamol 18(18.75%) is the highest region of prescribed drugs then Amoxicillin 12(12.5%), then Domperidone 11(11.46) then Metronidazole 10(10.42%), Ciprofloxacin 10(10.42%) and Ceftriaxone injection 10(10.42%), Next both Clonazepam and Lactulose 9(9.37%) and last Salbutamol 7(7.29%).

**11. The table of the Percentage (%) of different generic of drugs :**

<b>Generic name Of Drugs</b>	<b>Total Number of Drugs</b>	<b>Percentage (%)</b>
Clonazepam	9	9.37
Paracetamol	18	18.75
Metronidazole	10	10.42
Amoxicillin	12	12.5
Ciprofloxacin	10	10.42
Domperidone	11	11.46
Salbutamol	7	7.29
Lactulose	9	9.375
Ceftriaxone	10	10.42

From the following Table 12 We have shown that the prescribed drugs among the different pharmaceutical companies Sanofi pharma ltd 22(40%) is the highest region, next Square pharmaceuticals ltd 18(32.73%) and then others pharmaceuticals company 15(27.27%).

**Table 12: Tabular representation of prescribed drugs of pharmaceutical companies in Bangladesh :**

<b>Sl No</b>	<b>Pharmaceutical company</b>	<b>No of Drug</b>	<b>Percentage (%)</b>
<b>1</b>	Sanofi pharma Ltd.	22	40.00
<b>2</b>	Square pharmaceuticals Ltd.	18	32.73

3	Others	15	27.27
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### 4.3 Discussion :

A doctor's or physician's prescription is interpreted as a reflection of the doctor's or physician's attitude toward the disease and the function of pharmaceuticals in its treatment. [34]

The correct medicine to the right people at the right time is the top priority of the health-care system. [35]

The current survey used prescriptions from patients with dermatological disorders, communicable disease and medicine department of Dhaka Medical as its source of data. In this present case of study 30 indoor patients cases were collected. From this study it is notified that male patients are more admitted than the female patients in dermatology department.

From the guideline of drugs there is no permission of prescribing drugs more than 6 per day, but in this study doesn't follow the rule. Patients are prescribed drugs more than 10 that is not eligible.

Middle ages people are more admitted with their complications like respiratory distress, anaemia, chest pain. Many of them are advised to diagnosis CBC- ESR, serum electrolyte, chest X-ray.

One Antibiotic can be prescribed in a day, but sometimes some patients are prescribed two antibiotic in a day which may show harmful effects to the patients.

Overall it may be said that prescription is heart of medicines if it get right medication on the other it may lead physical and mental risk even death.

## **5 Conclusions:**

This type of study will provide to justify the rationality of prescribing drugs and medicines and also antibiotic and other groups of drugs among the perfectionist physicians in different dominion of Bangladesh. The diagnosis was directed based on the prescription model of drugs in various specialists in Dhaka Medical. To achieve the goal of rational medicine use, it is necessary to select the right medicine, control in the proper manner. The inappropriate use of antibiotics has resulted in the emergence of bacterial resistance to antibiotics and accompanying health concerns; our findings have crucial implications for public education and the implementation of antibiotic prescription rules in Bangladesh. The Government of Bangladesh should implement realistic techniques to limit antibiotic use, and implementing educational programs for prescriber. The report also advises doctors to be more knowledgeable, professional, and cautious when prescribing antibiotics to patients. As a result, there has been a substantial shift in prescribing habits, particularly the use of generic names.

**CHAPTER 5**

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