

## **A descriptive study on the present prescribing pattern for children under 5 years of age for different diseases in Bangladesh at Dhaka Shishu Hospital**

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### **Abstract**

In the present time, the percentage of children fall in sick is relatively higher. For this reason, they get admission into the hospital or has to visit the hospital and get prescribed different medicines from the doctors. For different reasons sometimes those medicines may be irrational. This survey was carried out from Dhaka Shishu Hospital, to evaluate the children prescription pattern in a hospital of Bangladesh to know the actual scenario. About 1100 prescription were collected from different department of this hospital. Out of 1100 prescriptions, around 67% of medicines were antibiotics, 34% antihistamine, 33% NSAID, 7% ionic supplement, anti-ulcerant and antiemetic. The percentage of the practice of polypharmacy was enormous.

**Keywords:** *Children, Prescription pattern, Irrational Drugs, Malpractice, Polypharmacy.*

## Introduction

Now day by day children are affected more by many diseases. According to UNICEF report, in current time almost 42% under-five children taken to health care provider due to different disease like pneumonia, diarrhea, etc. in Bangladesh. They are prescribed many class of drugs by the healthcare providers where many of them are irrational for children. This study was conducted to evaluate the children prescription pattern in Bangladesh to know the actual scenario in this regard.

This study carried out from Dhaka Shishu Hospital (Shere-Bangla Nagar, Dhaka-1207). Dhaka Shishu Hospital is one of specialized hospital for child care. This survey was carried out in between October 2017 to December 2017.

## Methodology

Almost 1100 prescriptions were collected from Dhaka Shishu Hospital, Dhaka, Bangladesh after getting permission from the hospital management authority. Prescriptions were collected from both indoor and outdoor sections.

Few highlighted information was collected from those prescriptions. Such as, patient's age, gender, prescribed medicines. [Figure 1, Figure 2].

## Result and Discussion

### Total male and female ratio

Among 1100 prescriptions, 616 prescriptions' patient were male whereas 484 prescriptions' were female. In percentage, it showed that 54% male and 44% female. Which indicated that male children patient are more influenced by infections compared to female children patient. [Figure 3].

### Patient positioning

This graph showed the ratio of male and female in different ages' children. Among 1100

prescriptions toddler (32%) and preschool (32%) age's patients were higher than other age's patient. The number of adolescent patients were less. Among these toddler, infant, preschool, school-aged children, the percentage of male patients were higher than female patients. But among adolescent children, female patients were higher than male patients. [Figure 4]

### Prescribing pattern of different Class of Antibiotics

Here, showed the number of the individual type of antibiotics were prescribed in all these prescriptions. Various kind of antibiotics were prescribed among 745 out of 1100 prescription. That means, 67% of prescription prescribed antibiotics to the children patients. The most commonly used antibiotic was Azithromycin. It was prescribed in about 152 prescriptions. After azithromycin, Ciprofloxacin was prescribed more and the number of prescriptions were about 128. Cefixime was prescribed in 100 prescriptions. [Figure 5]

### Prescribing pattern of different Class of Antihistamines

In 381 prescriptions out of 1100 prescriptions were prescribed antihistamine for children. Desloratadine and fexofenadine HCl were more prescribed antihistamine drugs. Most of these antihistamine drugs are not effective for children under 5 years. But still the drugs were abused there. [Figure 6]

### Prescribing pattern of other Class of drugs

[Table 1]

### Practice of Poly-pharmacy

After evaluating these prescriptions, it was found that the percent of the prescriptions in which, only 1 medicine prescribed, was 29%. 2 medicines prescribed prescription was 24%, 3 medicines prescription was 19%, 4 medicines prescription was 14%, 5 medicines prescribed prescription was 9%, 6 medicines prescribed

prescription was 5%. That means poly-pharmacy was practiced in almost 70% of prescription. [Table 2]

### Conclusion

Irrational use of medicines is a major global health challenge with significant implications for patients, healthcare systems and communities as a whole. Specially for children, its required to stop using of irrational use of drug otherwise that can lead to drug resistance, which will be very lethal for child health. Should avoid antibiotics for common disease like colds, the flu, runny noses. The key factors contributing to inappropriate medicines use are likely to change over time and health care providers need to be up-to-date with current trends.

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**Table 1.** Others prescribed Drugs

Others prescribed class of drugs	Sub classes of Drugs	In Total No. of Prescriptions
NSAIDs	Paracetamol	369
Ironic Suppliment	Sodium Chloride	87
Anti-ulcerant	Omeprazole	83
	Ranitodine	
Antiemetic	Domperidone	83
	Ondansetorn	
$\alpha$ -Adrenergic	Oxymetazoline	47
	Xylome tazoline	
Antifungal	Azoles	39
	Nystatin	
Antiamoebics	Metronidazole	33

**Table 2.** Amount of drugs per prescription

Number of drugs per Prescription	Number of prescriptions	Total %
6	5	5
5	30	9
4	214	14
3	339	19
2	378	24
1	134	29

Figure 1. Outdoor Patient's prescription

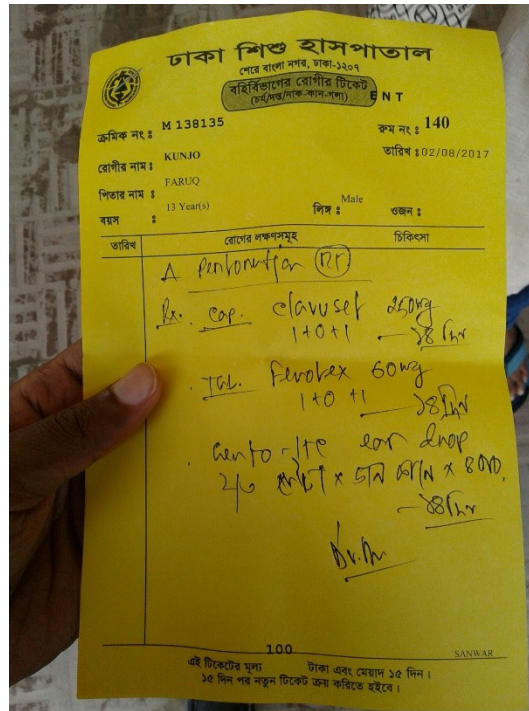


Figure 2. Indoor Patient's prescription



Figure 3. Gender ratio

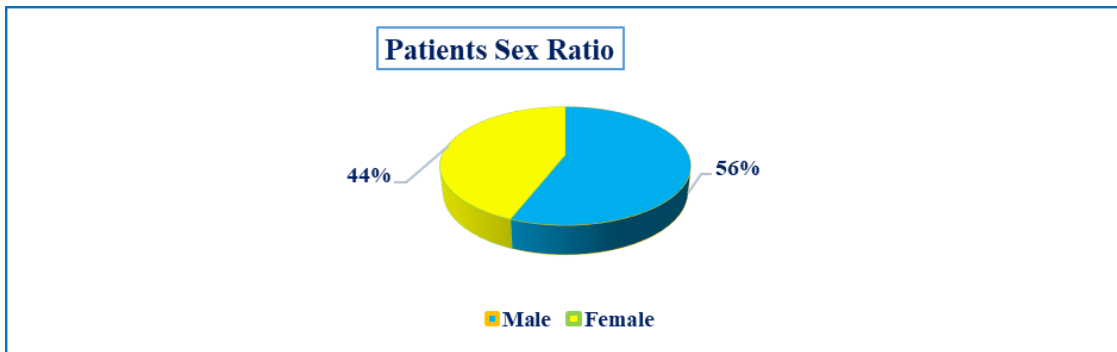
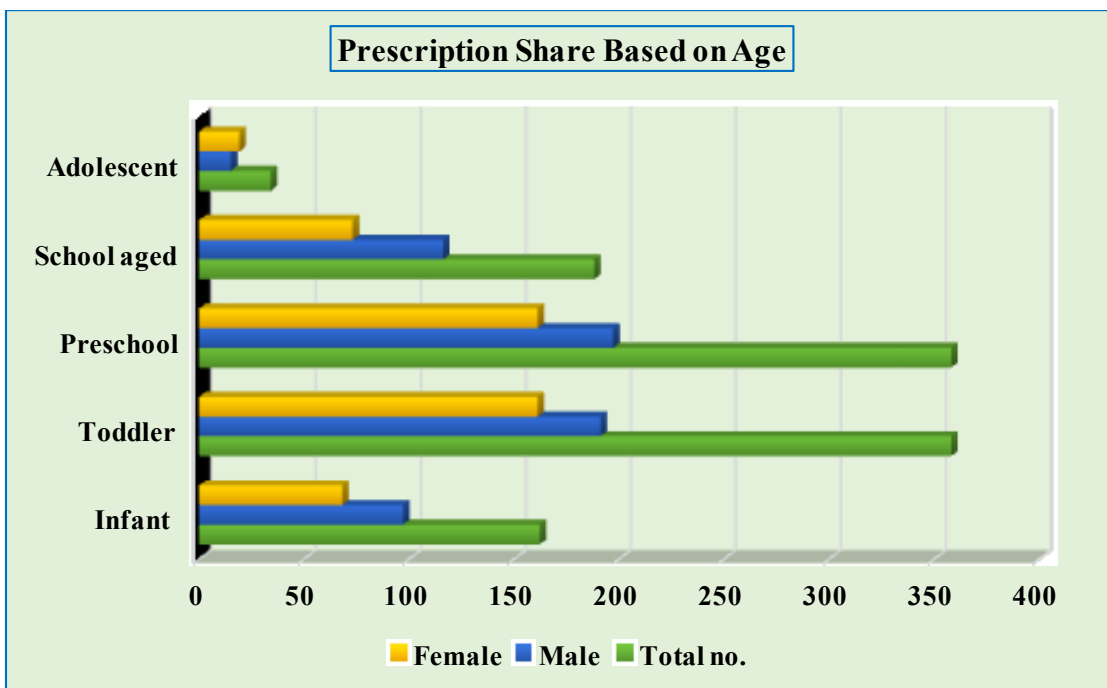
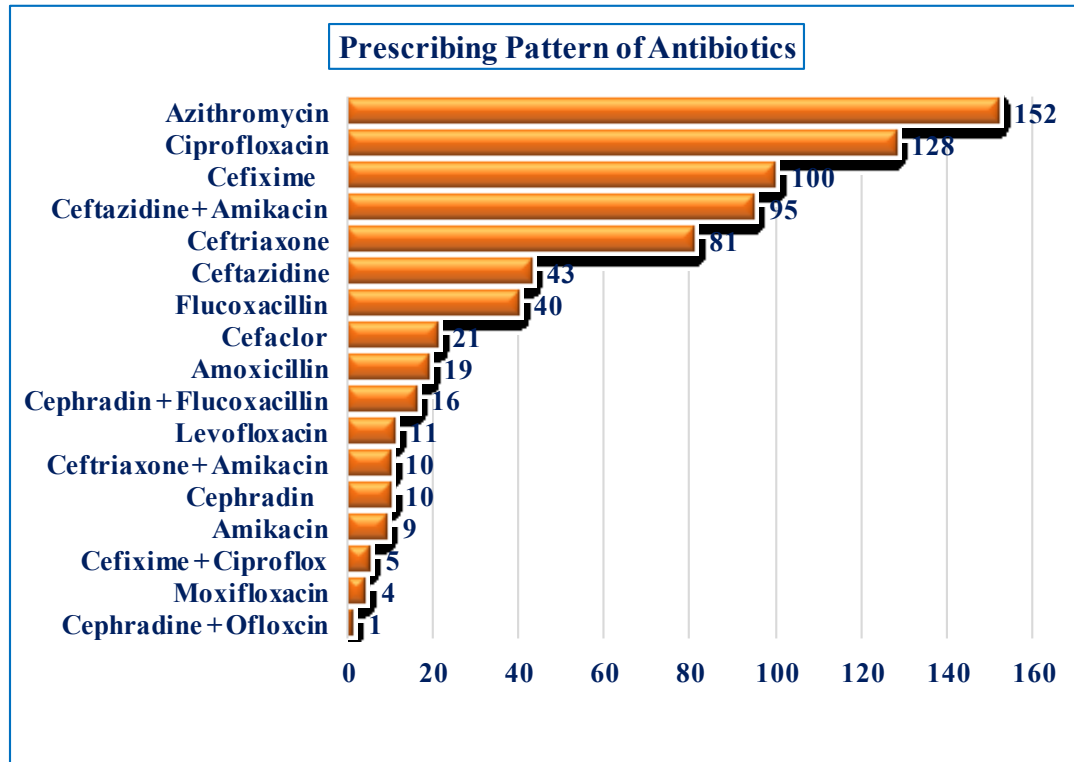


Figure 4. Most affected age group





**Figure 5.** Most prescribed antibiotics.



**Figure 6.** Most prescribed drug of Antihistamine group