

## A Survey on Current Scenario of the Model Pharmacies and Model Medicine Shops in Chittagong, Bangladesh

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### Abstract

*Secretary of the Ministry of Health and Family Welfare, Bangladesh, has approved the classification of all private retail drug outlets into two types, pharmacy and medicine shop. As per directorate general of drug administration, Bangladesh, a model pharmacy has to maintain some rules and regulations. It clearly declares and acknowledges that safeguarding the public interest is the foremost compelling reason for regulating the practice of pharmacy and the distribution of drugs and related devices. This study suggests that the model pharmacies are operating in accordance with the guidelines proposed by Directorate General of Drug Administration (DGDA), Bangladesh. There are many standards present for the establishment and operation of model pharmacies such as standards of personnel, standards of premises, dispensing, storage of medicine, hygiene, record keeping and documentation, disposal of damaged or expired medicines, pricing of pharmaceuticals, reference and materials, offenses and penalties etc. All the data had been collected by providing questionnaires to various model pharmacies in the Chittagong city. The area of the model pharmacies should be 300 square feet but many of them are not maintaining it. In terms of the physical conditions, the results were satisfactory except the less availability of a separate patient counseling room and adequate seat for the patients; storage conditions of the medicines were found satisfactory. None of the model pharmacies possessed the Adverse Drug Reaction (ADR) reporting form and none of them had reported a single ADR since its establishment. Records of the all the medicines dispensed to the patients were kept in a very few of the model pharmacies and a few of them only kept the records of antibiotic.*

**Keywords:** Chittagong city, DGDA, implementation, model pharmacy, survey.

### INTRODUCTION

As we know that pharmacy is the multidisciplinary subject, it is also the technique of preparing and dispensing drugs. By completing B. Pharm (Honors), one can achieve himself as A grade Pharmacist. Recently, the World Health Organization (WHO) calculates that there are minimum 2.6 million pharmacists and other pharmaceutical personnel worldwide [1]. In the United States, specializations in pharmacy practice recognized by the Board of Pharmacy Specialties include: cardiovascular, infectious disease, oncology, pharmacotherapy, nuclear,

nutrition, and [2]. A pharmacy is the place where most pharmacists practice the profession of pharmacy. It is the community of pharmacy where the dichotomy of the profession exists, health professionals who are also retailers [3]. According to Sharif Kaf al-Ghazal, the opening of the first drug stores are recorded by Muslim pharmacists in Baghdad in 754 [4]. Nowadays, it is observed that many medicine shops or pharmacies are grocery store like in their own design [5]. Pharmacies are typically required to have a pharmacist on-duty at all times when open [6]. For the benefits

of public health, it is also mandatory that the owner of a pharmacy must be a registered pharmacist [7]. It is also observed that in many countries, the dispensary is subject to pharmacy legislation, with requirements for good storage conditions, mandatory texts, instruments, etc., specified in legislation [8]. Where it was once the case that pharmacists stayed within the dispensary compounding/dispensing medications, there has been an increasing trend towards the use of trained pharmacy technicians while the pharmacist spends more time communicating with patients [9]. As per Directorate General of Drug Administration (DGDA), Bangladesh guideline, Model Pharmacy is the shop where medicines are to be sold and it means developing, implementing, and enforcing uniform standards for the purpose of protecting the public health. It clearly declares and acknowledges that safeguarding the public interest is the foremost compelling reason for regulating the practice of pharmacy and the distribution of drugs and related devices. Model Pharmacy (Level I), in this level, an A grade pharmacist have to attend all time when a pharmacy is open and that time B or C grade pharmacist can help him. Model Medicine Shop (Level II), in this level, a C grade pharmacist can carry out the service but Level II would not be called as Model Pharmacy. So Level II can be called as medicine or drug house according to DGDA. Not only dispensing medicines but also pharmacists are

increasingly expected to be compensated for their patient care skills and also they can develop themselves for inventing new drugs [10].

## MATERIALS AND METHODS

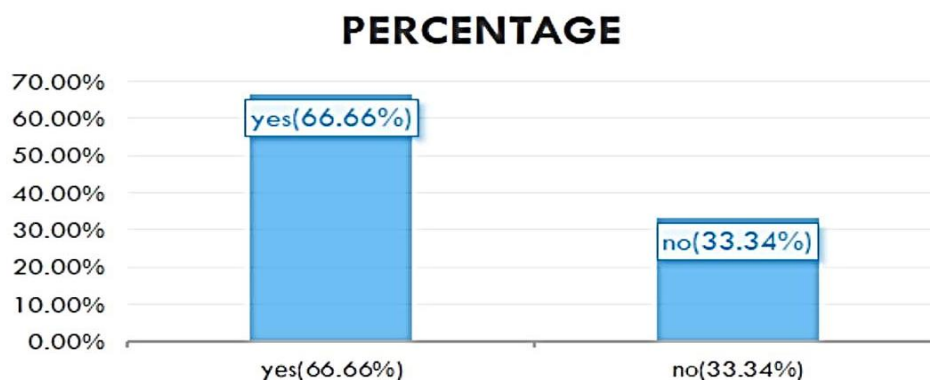
It was descriptive type of cross sectional study with one step satisfaction. During the study, nine Model Pharmacies were surveyed. The name and the location of the surveyed model pharmacies and medicine shops are Quickmaid Pharmacy at Dhampara, Pinnacle Pharmacy at Mehedibag, Medicare Pharmacy at Mehedibag, QPS Pharmacy at GEC circle, Lazz Pharmacy at O.R. Nizam Road, Zinnat Pharmacy at Chawkbazar, Shibli Pharmacy at Agrabad, M- Drug House Pharmacy at Mehedibag, MCM Model Pharmacy at Chawkbazar etc. Those areas were being surveyed from 1<sup>st</sup> February 2018 to 5<sup>th</sup> March 2019 at Chittagong in Bangladesh.

## RESULT AND DISCUSSION

According to Directorate General of Drug Administration (DGDA), Bangladesh, the following requirements is needed for a Model Pharmacy where medicines to be sold.

### 300 Square Feet Area

As per Directorate General of Drug Administration guideline, at least 300 square feet area is needed for a Model Pharmacy, but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 1.



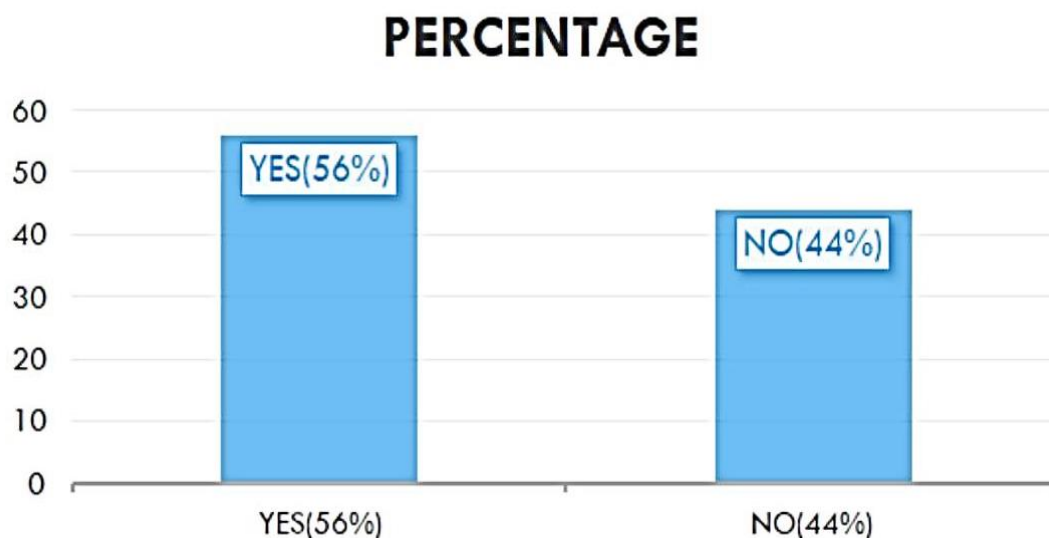
**Figure 1:** 300 square feet area for establishing a model pharmacy.

### Availability of Adequate Seating

As per Directorate General of Drug Administration guideline, adequate seating facility is needed for a model Pharmacy

### Facility

but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 2.



**Figure 2:** Availability of adequate seating facility for establishing a model pharmacy.

### Temperature Control Under 30 Degree

As per Directorate General of Drug Administration guideline, temperature control under 30 degree is needed for a

Model Pharmacy, but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 3.

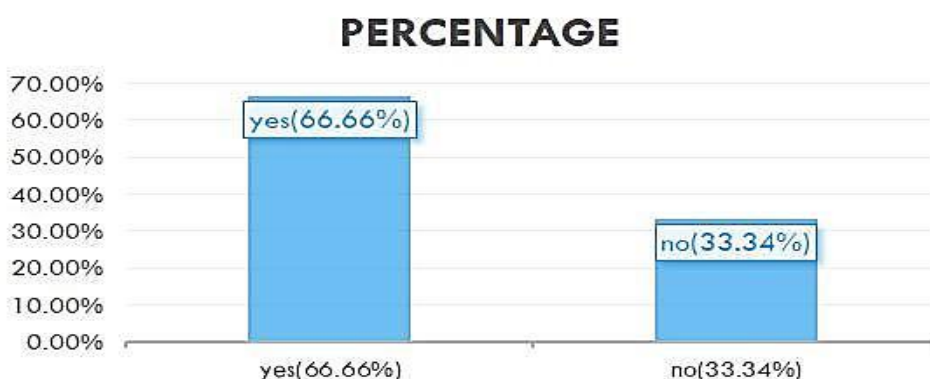


**Figure 3:** Temperature control under 30 degree for establishing a model pharmacy.

### Availability of Toilet/Washroom

As per Directorate General of Drug Administration guideline, availability of toilet/washroom is needed for a Model

Pharmacy, but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 4.

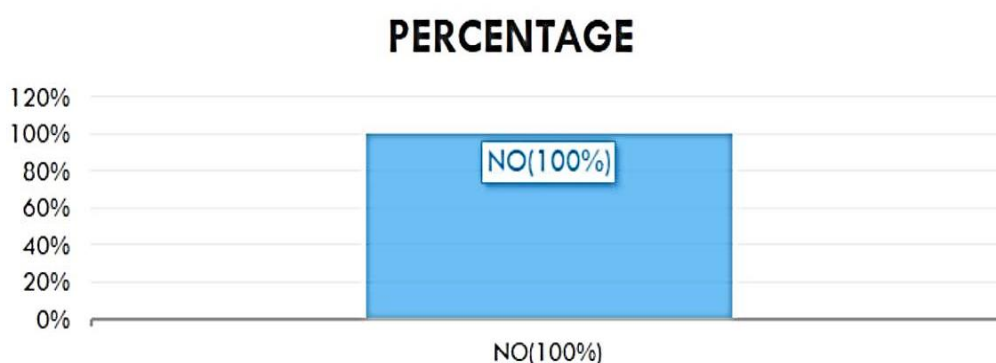


**Figure 4:** Availability of toilet/washroom for establishing a model pharmacy.

### Availability of Separate Room for Patient Consulting

As per Directorate General of Drug Administration guideline, availability of

separate room for patient consulting is needed for a model Pharmacy but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 5.

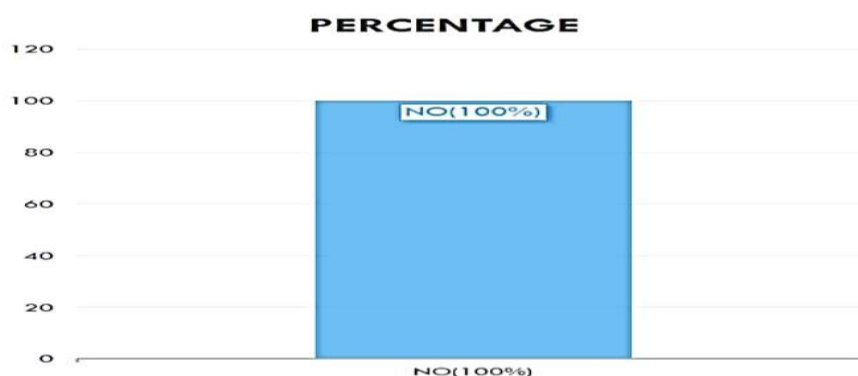


**Figure 5:** Availability of separate room for patient consulting for establishing a model pharmacy.

### Availability of Doctor Inside the Pharmacy

As per Directorate General of Drug Administration guideline, availability of

doctor inside the pharmacy is not needed for a Model Pharmacy, but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 6.

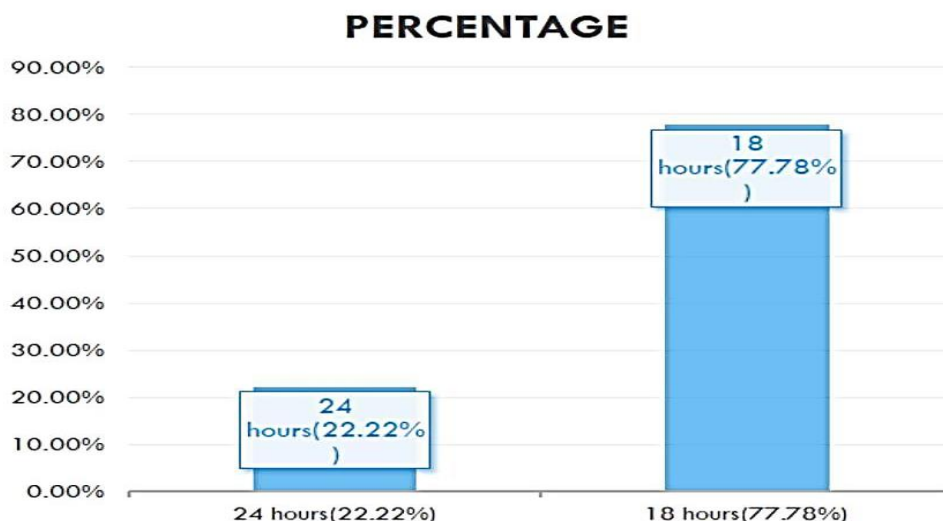


**Figure 6:** Availability of doctor inside the pharmacy for establishing a model pharmacy.

### Operating Hour for Model Pharmacy

As per Directorate General of Drug Administration guideline, operating hour, 24 hour for model pharmacy is

needed for a Model Pharmacy, but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 7.

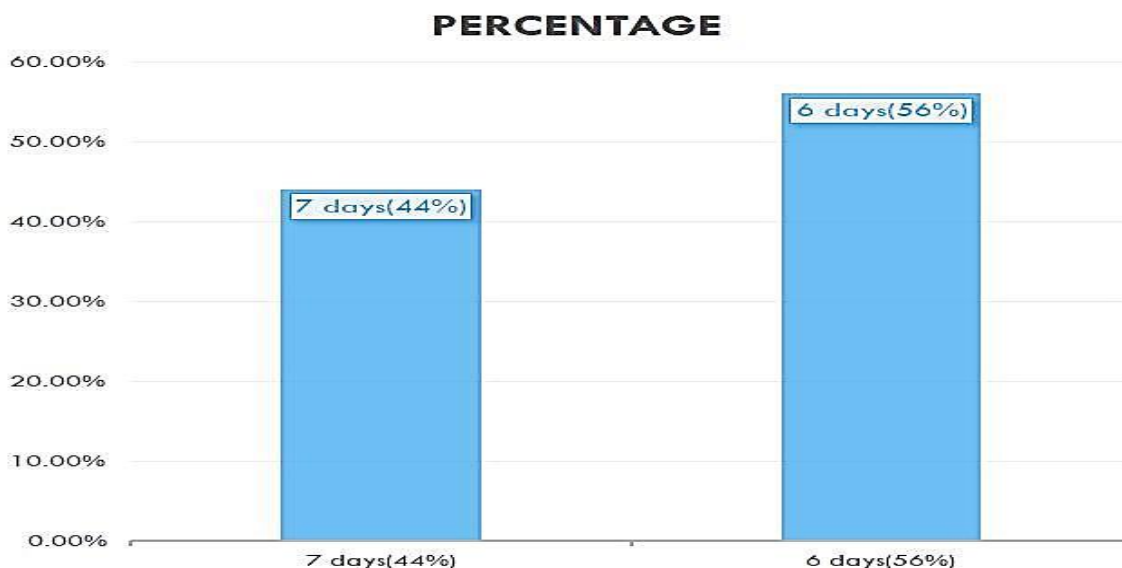


**Figure 7:** Operating hour for model pharmacy for establishing a model pharmacy.

### Operating Days in a Week

As per Directorate General of Drug Administration guideline, operating days (7 days) in a week is needed for a

Model Pharmacy, but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 8.

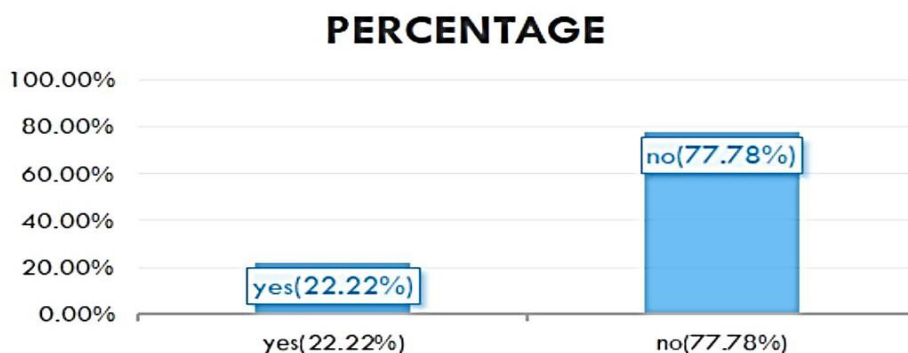


**Figure 8:** Operating days in a week for establishing a model pharmacy.

### Presence of A grade pharmacist

As per Directorate General of Drug Administration guideline, presence of A grade pharmacist is mandatory for a

model Pharmacy but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 9.



**Figure 9:** Presence of A grade pharmacist for establishing a model pharmacy.

**Performing Certain Patient Conditions  
(blood sugar, blood temperature, body weight, pregnancy test etc.)**

As per Directorate General of Drug Administration guideline, performing

certain patient conditions is needed for a Model Pharmacy, but all surveyed pharmacy could fulfill this requirement which is shown below in Fig. 10.



**Figure 10:** Performing certain patient conditions for establishing a model pharmacy.

**Storing Prescription Medicines  
Separated from the OTC Medicine**

As per Directorate General of Drug Administration guideline, storing prescription medicines separated from

the OTC medicine is needed for a Model Pharmacy, but all surveyed pharmacy could fulfill this requirement which is shown below in Fig. 11.



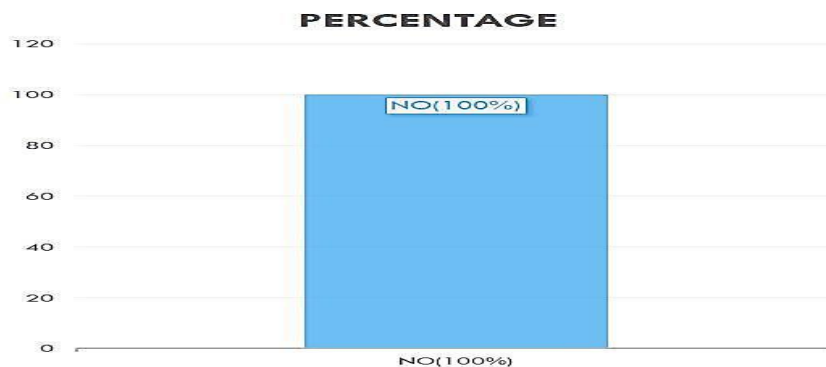
**Figure 11:** Storing prescription medicines separated from the OTC medicine for establishing a model pharmacy.



### **Selling of Narcotic Drugs in the Model Pharmacies**

As per Directorate General of Drug Administration guideline, selling of narcotic

drugs in the model pharmacies is prohibited for a Model Pharmacy, but all surveyed pharmacy could fulfill this requirement which is shown below in Fig. 12.

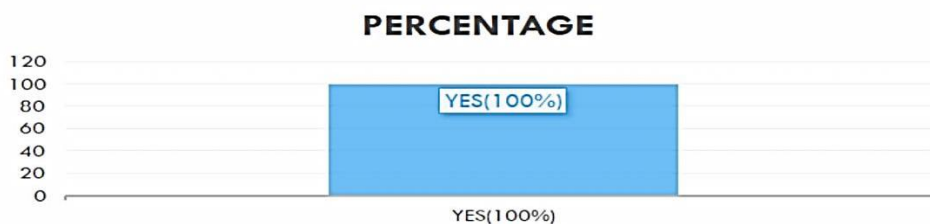


**Figure 12:** Selling of narcotic drugs in the model pharmacies for establishing a model pharmacy.

### **Storing Vaccine and Insulin between 2° to 8°**

As per Directorate General of Drug Administration guideline, storing vaccine

and insulin between 2° to 8° is mandatory for a Model Pharmacy, but all surveyed pharmacy could fulfill this requirement which is shown below in Fig. 13.

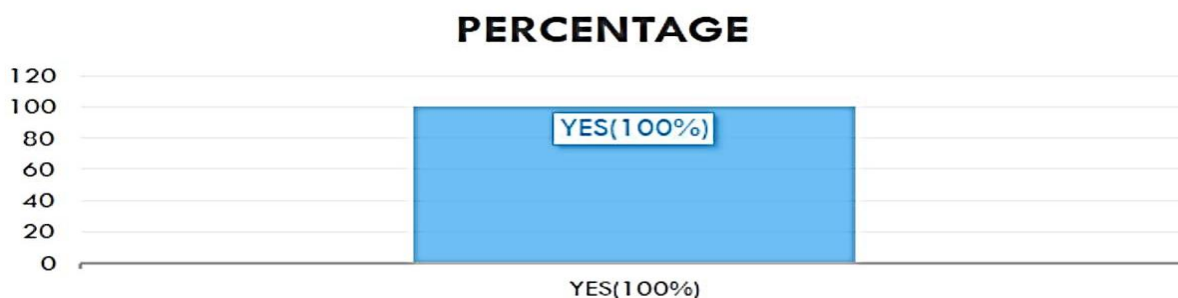


**Figure 13:** Storing temperature for establishing a model pharmacy.

### **Returning the Damaged or Expired Medicines to the Companies**

As per Directorate General of Drug Administration guideline, returning the damaged or expired medicines to the

companies are needed for a Model Pharmacy, but all surveyed pharmacy could fulfill this requirement which is shown below in Fig. 14.

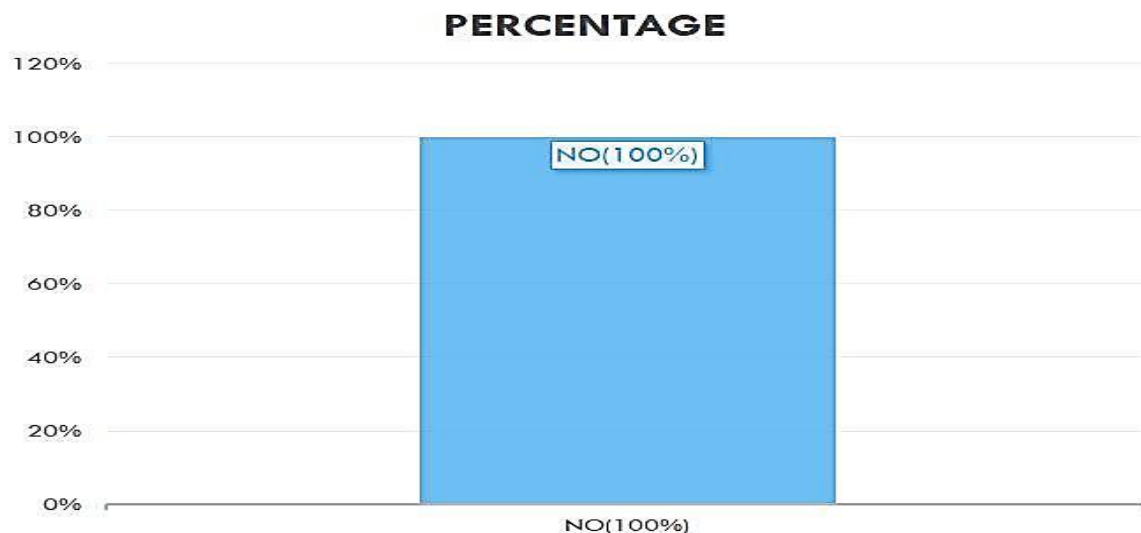


**Figure 14:** Returning the damaged or expired medicines to the companies for establishing a model pharmacy.

**Adverse Drug Reaction (ADR) Reporting:**

As per Directorate General of Drug Administration guideline, Adverse Drug

Reaction (ADR) Reporting is needed for a Model Pharmacy, but all the surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 15.

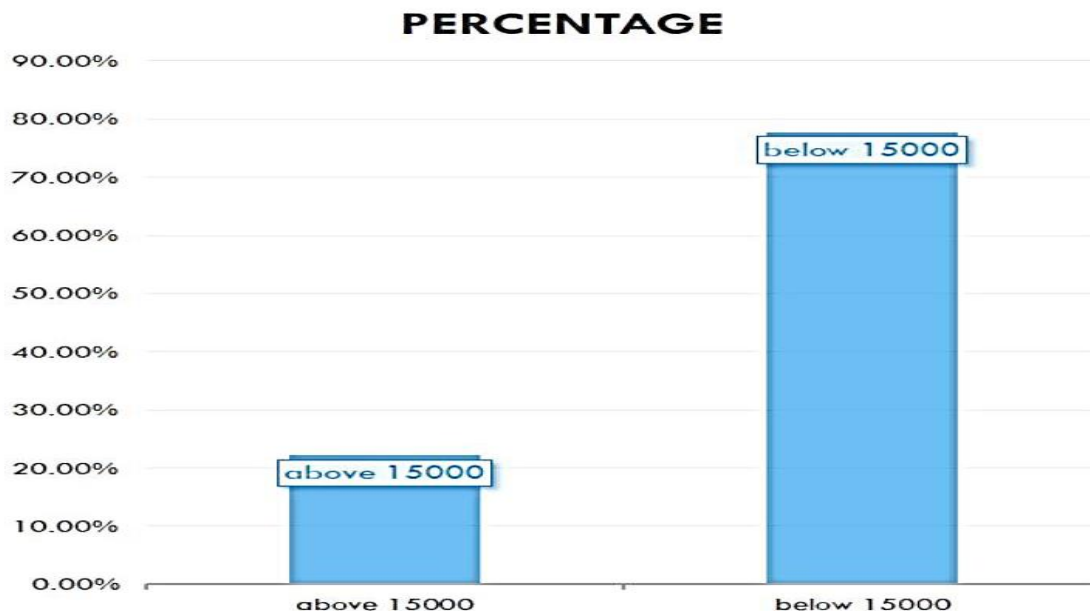


*Figure 15: Adverse Drug Reaction (ADR) reporting for establishing a model pharmacy.*

**Salary of a Grade Pharmacist**

As per Directorate General of Drug Administration guideline, salary of a grade pharmacist should be above

15000 taka for a model Pharmacy but all surveyed pharmacy could not fulfill this requirement which is shown below in Fig. 16.



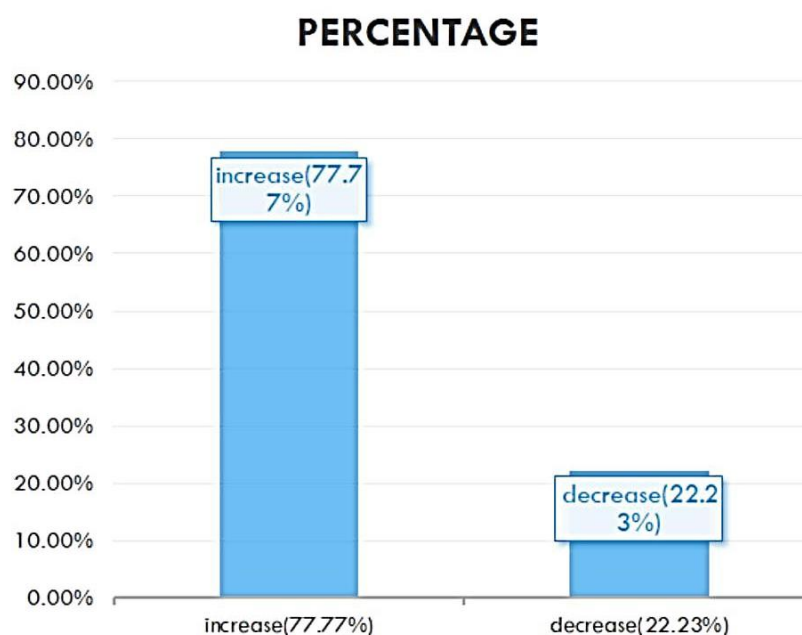
*Figure 16: Salary of pharmacist for establishing a model pharmacy.*

**Customer Flow after Converting into Model Pharmacy**

Customer flow after converting into Model

Pharmacy increases in almost all the surveyed pharmacy which is shown below in Fig. 17.





**Figure 17:** Customer flow after converting into model pharmacy for establishing a Model Pharmacy.

## CONCLUSION

Bangladesh has become a role model for many other developing countries in achieving all health targets. But, it has been found that most of the model pharmacies lack an A grade pharmacist and also has other problems which need to be inspected by the drug authority and need to be solved as soon as possible for the development; implementation and conforming uniforms standards for the purpose of protecting the public health. It hope that the country will continue to perform in improving consumer access to and appropriate use of quality medicine and pharmaceutical services through this new system of accrediting retail drug outlets. This will also increase consumer awareness, strengthen regulatory oversight, increase investments and employment opportunities for pharmacy professionals-both men and women and ultimately improve health outcomes. The drug authority should be working towards improving the accessibility, quality and affordability of healthcare to meet the needs of our population. Pharmacists who are the part of this healthcare team, play an

integral role in attaining this goal. Pharmacies will sell drug complying with standards including appointment of graduate pharmacist. If the aim successful, then, it will be spread across Bangladesh and model pharmacy will be established gradually.

## REFERENCES

1. World Health Organization (2011), "World Health Statistics", Table 6: Health workforce, infrastructure and essential medicines, Geneva, Accessed 21 July 2011.
2. Board of Pharmacy Specialties, Current Specialties
3. History of Pharmacy Web Pages - Sweden's oldest pharmacies Archived 23 June 2011 at the Wayback Machine.
4. Hadzovic, S (1997), "Pharmacy and the great contribution of Arab-Islamic science to its development", *Medicinski Arhiv (in Croatian)*, Volume 51, Issue (1-2), pp. 47-50, ISSN 0025-8083. OCLC 32564530. PMID 9324574.

5. London Free Press Regional News Archive, Canada Internet Pharmacy Merged In \$3.8 Million Deal Archived 26 April 2012 at the Wayback Machine.
6. NBCH Action Brief: Specialty Pharmacy. *Specialty Pharmacy* December, 2013. Accessed 27 October 2014.
7. "The definition of clinical pharmacy. Pharmacotherapy", *American College of Clinical Pharmacy*, Volume 28, Issue 6, pp. 816–817.
8. "Pharmacy Student Handbook 2017-2018" (PDF). KU Pharmacy. August 2017. Retrieved 6 April 2018.
9. Burke JM, Miller WA, Spencer AP, et al. (2008), "Clinical pharmacist competencies", (PDF). *Pharmacotherapy*, Volume 28, Issue 6, pp. 806–815.
10. "Evidence of the Economic Benefit of Clinical Pharmacy Services: 1996–2000", *American College of Clinical Pharmacy*,