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Medicines Procurement from Database System (MPDS) for Bangladeshi Individual: A Proposal

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ABSTRACT

Pharmaceutical sectors of Bangladesh have developed so much and the quality of medicines is up to the mark. US FDA, UK MHRA, TGA certification achievement is the remarks of this. Although the pharmaceutical sectors of Bangladesh have augmented, the health sector of here has not developed in such a way because of improper management. Medicines procurement is one of the biggest challenges for the people. Adulterated medicines, procurement at high price and finding difficulties of medicines are the main problems. Rapid digitalization in the information and communication technology of the country may be a hope and weapon to solve these problems by initiating medicines procurement from database (MPDS) system by coordinating all the digital facilities like disease and diagnostics database system, health cards system, authorizing digital model pharmacy with digital database system as well as the telemedicine.

Keywords: Pharmaceutical sector, Health sector, Innovative medicine procurement system

INTRODUCTION

Health is one of the main basic needs of a person. Without proper health care management system it is impossible to develop a nation [1]. Correct medicines in a quickest possible time are very much needed for patient's compliance. Information and communication technology (ICT) based healthcare system can open a new hope for the patients which will be effective for them [2]. Both developed and developing countries are currently using ICT system to improve their health sectors by ensuring rational use of medicines [3]. Again coordinating modern system like diseases and diagnostic database system, it is very much possible to ensure a safe and patient compliant healthcare system [4] In developing countries like Bangladesh which managerial structure is very poor, that can be overcome by coordinating the established modern technologies. According to the report of Counterpoint Technology Market Research, the number of smartphone users in Bangladesh was 8.2 million in the year of 2015 which is increasing numerously day by day. This number indicates that, people are up to date and aware with smartphone technology. By coordinating the Disease and diagnostic database system [4] and smartphone we can easily design Medicines Procurement from Database System (MPDS) through which a patient can procure his correct medicines in a lightning speed from a safe and reliable source.

In Diseases and Diagnostics Database (DDD) systems, all the data of patient is stored in a server which is accessible by smart card with number, finger print or by scanning implant chip [4]. So, it is a useful tool for the patients as physicians store the prescribed medicines. After getting the prescribed medicines the main objective of a patient is to procure those medicines from a reliable source. All the pharmacy shops should have the government registration. All the medicines and pharmaceuticals products lists have to be stored in a central database by the pharmacy shop. This database can be accessed by the patient. If a patient wants to buy a medicine then he/she will go to the specific application/ software/ website of that database and input the medicines list which he/she is searching for. The GPRS system will be on his/her device (smartphone or laptop/desktop). The system will show the number of pharmacies which are near to his/her distance where he/she can find his/her medicines with unit price list. He/she can also calculate the total price by inputting the total number of medicines he/she wants to buy. Entry of medicines can be single to several. He/she can

search pharmacies by specific region basis if he/she wants to buy medicines from a specific area. In case of online or home delivery system he/she will give the DDD number to the respective pharmacy which is near to them and from where he/she can get all the medicines. He/she can order from multiple pharmacies if any medicine is stocked out from a pharmacy. If any medicine is from foreign countries and not available in Bangladesh then the contact number of that respective companies will be appeared in the MPDS system. It will help the patients to contact with those companies to get medicines. Again they can contact with the local companies if any medicine is marketed out. It will help them in all terms to get the correct medicines all the time in a quick time (Figure 1).

RESULT AND DISCUSSION

Demographic characteristics of the respondents

From the survey it was found that 68.5% of the respondents were male and 31.5% respondents were female (Table 1).

Do you think that MPDS system is safe, effective, time saving and friendly than the conventional procurement system?

Most of the respondents (83.5%) gave positive response as they believe that if this system will be introduced then they will be benefited and this system will help them to procure safe and effective medicines in an easy way. On the other hand 13.5% respondents had not any idea either it will help them or not (Figure 2).

Do you have proper knowledge about smartphones/laptop/desktop and its specifications relating software or application system?

92% of the respondents have proper knowledge about smartphones and its specifications related to the software or application system. Rest 8% was not aware of this modern technology (Figure 3).

Which problems may occur in MPDS system?

The survey showed that, all the respondents think that additional cost is the main problem which may be a burden and

Table 1: Demographic characteristics of the respondents

Respondents	Frequency	Percent (%)
Male	137	68.5%
Female	63	31.5%
Total	200	100

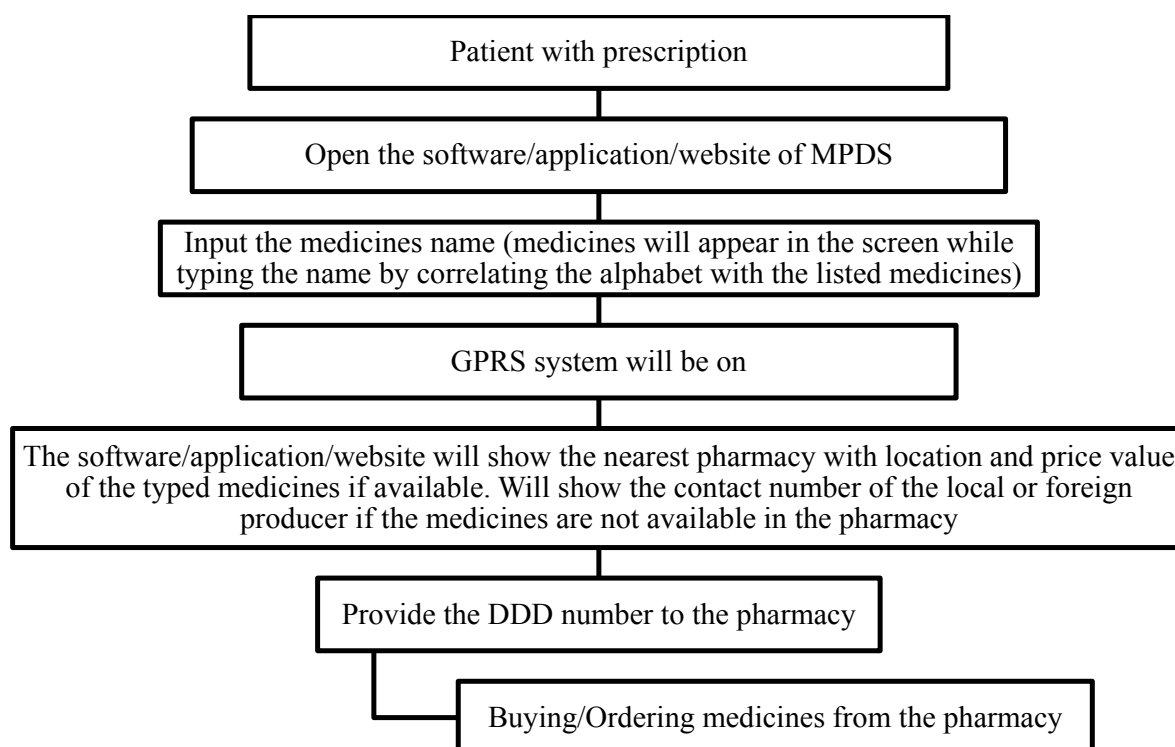


Figure 1: Summary/Guidelines on Database System

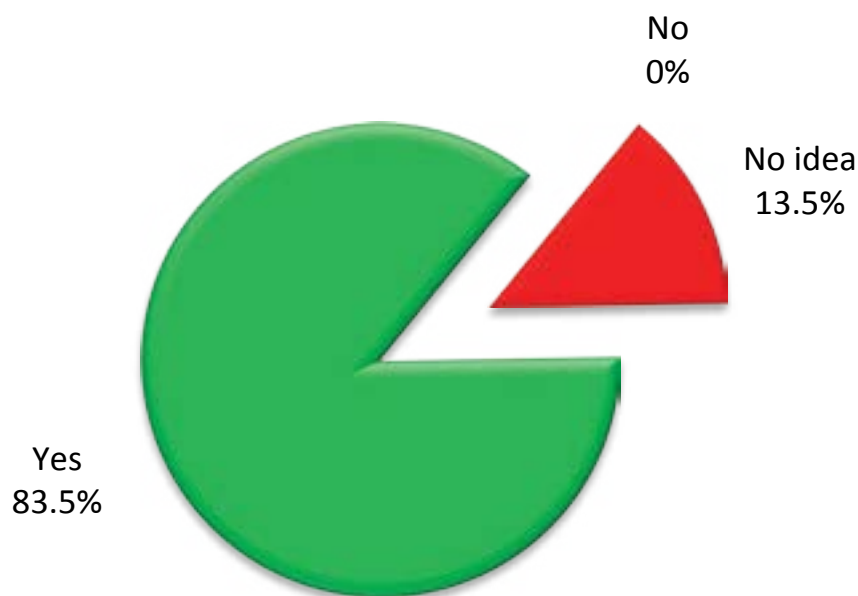


Figure 2: Safe, effective, time saving and friendly use of MPDS system

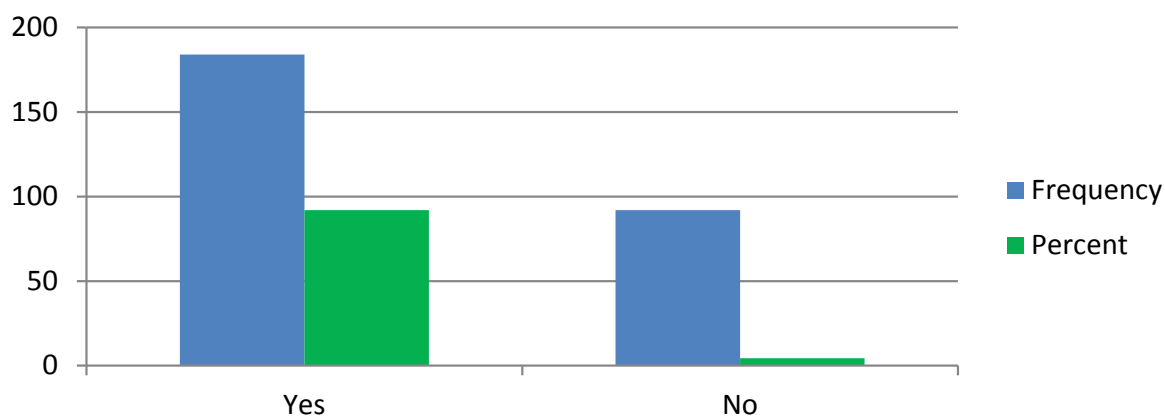


Figure 3: Proper knowledge of smartphones and its specification relating software and application system of the respondents

72% of the respondents think that, networking problems may be the main factor which may cause problem in MPDS system. 8.5% respondents had doubt about the usage of software and application system which is the people illiteracy. 14% responded for others additional factors that may be a precursor of MPDS system (Figure 4).

Did you ever fail in getting all medicines from a pharmacy or failed to find a pharmacy in a quick time?

All the respondents give negative results as they failed to get all the medicines from a pharmacy shop and failed to get the pharmacy in an area in his/her lifetime (Figure 5).

MPDS can be a fast and effective system for patient's safety and compliance. The main benefits will be-

- 1) In emergency it will play a vital role for the patient. If any patients are hospitalized or getting treatment in an area where he/she is for the first time and do not know the places, then he/she can easily get his/her medicines by using MPDS system.
- 2) Pharmacovigilance of drugs will be easy as all the drugs will be in a database and the authority can check out that list any time they want.
- 3) Price control will be easier.

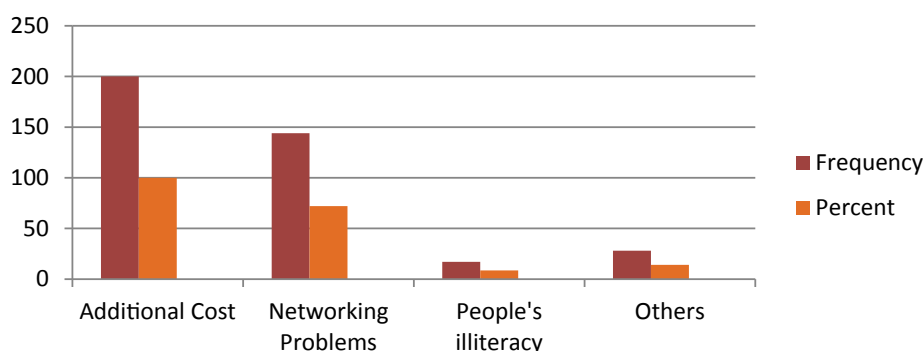


Figure 4: Problems that may arise in MPDS system

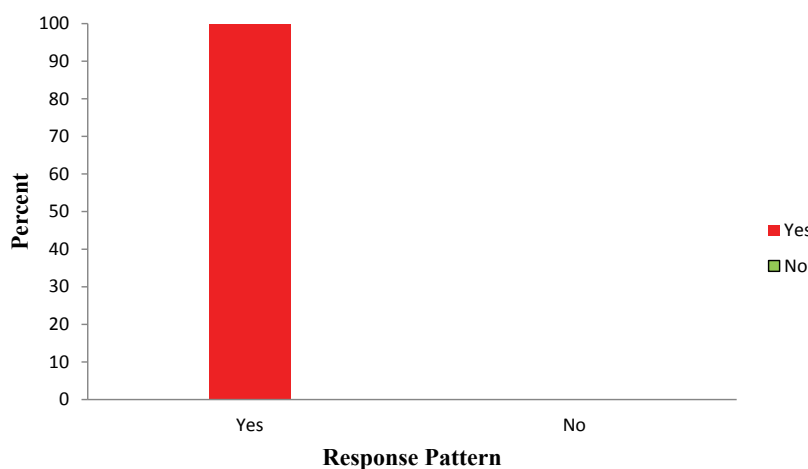


Figure 5: Failure to get medicines

- 4) Patients will get the best and adulterated free drugs in a proper rate as all the information will be in the database.
- 5) Online drug delivery system will be easier as the patients will get all the information from the MPDS database and they can order the medicines by giving their DDD smart card number from his suitable place.

Some problems may occur in this system. All are not aware of modern technology so they will feel burden to use this system. Again additional cost of internet or server data charge as well as networking problems may be a problem to use this system. Government should take steps to enrich this sector by giving subsidiary for better patient compliance. On the other hand, people concern and awareness should be raised. Others related problems should be solved in order to get the best service. By implanting this system we can easily reduce the patient's burden and can treat patients in emergency cases.

CONCLUSION

A suitable and effective system like MPDS may be a weapon to solve the problems of our health sector. Awareness should be raised and government should pay attention in this system. The coordination of the software/application should be done in a smooth way and special technologies should be applied here for the patient compliance.

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