



Prospect of Tele-Pharmacists in Pandemic Situations: Bangladesh Perspective

Mohiuddin AK^{1*}

¹Secretary and Treasurer, Dr. M. Nasirullah Memorial Trust, Tejgaon, Dhaka, Bangladesh

Corresponding Author: **Abdul Kader Mohiuddin**

Address: Secretary and Treasurer, Dr. M. Nasirullah Memorial Trust, Tejgaon, Dhaka 1215, Bangladesh; Tel: +8801711885101; E-mail: dr.m.nasirullah.trust@gmail.com

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Abstract

Currently, coronavirus COVID-19 has affected 209 countries around the world, killed more than 82,000, and infected more than 1.4 million, according to worldometer, April 08, 2020. Home-care is especially important in these situations because hospitals are not seemingly safe during pandemic outbreaks. Also, the chance to get out of the home during the lockdown period is limited. Telemedicine and telehealth technologies are especially effective during epidemic outbreaks when health authorities recommend implementing social distance systems. Telephone-based measures improve efficiency by linking appropriate information and feedback. In addition to increasing access to healthcare, telemedicine is a fruitful and proactive way to provide a variety of benefits to patients seeking healthcare; diagnose and monitor critical and chronic health conditions; improve healthcare quality and reduce costs.

Keywords

COVID-19, Coronavirus, Tele-Pharmacists

Abbreviations

IEDCR-Institute of Epidemiology, Disease Control and Research

Introduction

Bangladesh's health care services are becoming unusually concentrated in a small fraction of costly critical health-demanding patients. A large part of these complex-patients suffers from multiple chronic diseases and are spending a lot of money. Tele-pharmacy includes patient counseling, medication review, and prescription review by a qualified pharmacist for the patients who are located at a far distance from the pharmacy. The most common way to use telemedicine is a responsive model, primarily

physician-led with virtual visits stimulated by alerts using interactive services, which facilitates real-time interaction between the patient and provider [1]. It delivers resilience to services and enables pharmacists to work remotely, reducing the need for long journeys and increasing job satisfaction [2]. The rise of pharmacists in epidemic situations has become increasingly popular in developed countries such as the United States, Australia, Canada, and the United Kingdom.

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According to information from recently published articles in several ongoing journals, books, newsletters, magazines, etc., the duties, authority, and responsibilities of pharmacists are completely different from doctors and nurses, although there are some similarities. Along with doctors, pharmacists can serve as frontline healthcare workers during epidemics. The profession is developed and highly praised in both developed and underdeveloped countries. Millions of professional pharmacists worldwide work in various organizations, and according to data from the International Pharmaceutical Federation (FIP), nearly 75% of them work inpatient care [3]. Even in the United States, the continued lacking of primary health providers and medical specialists has made it possible for pharmacists to care for ambulatory patients with chronic diseases in a variety of treatment services [4].

Pharmacy Education in Bangladesh

Pharmacy Education in many developing countries, including Bangladesh, is still limited to didactic learning that produces theoretically 'skilled' professionals with degrees. Manpower development for community pharmacies in Bangladesh is not systematically regulated and constitutes an important public health issue. Three levels of pharmacy education are currently offered in Bangladesh leading to a university degree, a diploma, or a certificate. Graduates with degrees work in the industry while those with diplomas work in hospitals [5]. Pharmacy is taught in about 100 public and private universities in Bangladesh and about 8000 pharmacy students graduate every year [6]. However, the graduates who pass out do not get employment easily due to their poor training, lack of in-depth knowledge of fundamental concepts and practical skills [7]. Consequently, skilled graduates leave for overseas where they find more prosperous jobs. Alam et.al, 2014 argued that Pharmacy Education can be able to contribute both public and private benefits if a realistic pattern is ensured on its operation [8].

Present State of Pandemic Situation Handling by Bangladeshi Hospitals

More than half of the 88 coronavirus cases detected in Bangladesh have been reported in the capital Dhaka. The virus hit a total of 11 out of the 64 districts in the

country until 05.04.2020 after the first known cases were reported around a month ago, according to the government's disease control agency IEDCR [9]. Many patients with fever, cold, and breathing problems – which are also COVID-19 symptoms – have gone untreated as the hospitals in Dhaka are sending them to the IEDCR for coronavirus test [10]. Many doctors are not providing services fearing the contagion and lab technicians are shunning workplaces halting medical tests, according to the patients.

In some cases, serious patients who are not affected by COVID-19, moved from one hospital to the other but could not receive treatment and finally died, the media reported. In another case, the doctor fled leaving the patient behind [1-14]. Doctors and other healthcare workers say they do not have adequate personal protective equipment and the health system cannot cope with the outbreak [15]. Police have locked down a total of 52 areas of Dhaka after Covid-19 positive patients were found in the localities [16]. Experts say elderly people infected with coronavirus need ICU to support the most. The number of older persons in the country is over 0.8 million [17]. The country's entire public health system has less than 450 ICU beds, only 110 of which are outside the capital Dhaka [18]. The economic shutdown sparked by COVID-19 threatens millions of livelihoods in the country imminently.

Under Utilization of Hospital Pharmacy

The pharmacy profession is still lagging in developing countries as compared with developed countries in a way that the pharmacy professionals have never been considered as a part of the health care team neither by the community nor by the health care providers. Although hospital pharmacists are recognized for their importance as health care providers in many developed countries, in most developing countries it is still underutilized or underestimated [19-22]. Hospital pharmacy practice is just started in some private modern hospitals in Bangladesh which is inaccessible for the majority of peoples due to high patients cost of these hospitals [23]. Bangladesh is the seventh most populous country in the world and the population of the

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country is expected to be nearly double by 2050 [24].

According to World Bank data, Bangladesh has 8 hospital beds for every 10,000 people; by way of comparison, the US has 29 while China has 42 [18]. It has been found in Bangladesh that more than 80% of the population seeks care from untrained or poorly trained village doctors and drug shop retailers [25]. A survey in Dhaka reported that 48% of respondents with symptoms of acute respiratory illness (ARI) identified local pharmacies as their first point of care. Licenses are provided to drug sellers by the Directorate General of Drug Administration when they have completed a grade C pharmacy degree (ie, 3 months course) to legally dispense drugs [26] but a grade A pharmacy degree holder, having a B.Pharm or PharmD degree are more equipped to handle these situations if trained properly. Knowledge and helpfulness of pharmacists were identified as two major determinants that could not only satisfy and but also promote a willingness to pay for the service [27]. They can individualize the medications and their dosing according to the needs of the patient, which can minimize the cost of care for the medication.

In Bangladesh, however, graduate pharmacists do not engage directly in-patient care. Here, pharmacies in hospitals are primarily run by non-clinically educated, diploma pharmacists [28]. If the hospital pharmacy is established, patient care, proper dispensing of medications, and other patient-oriented issues can be handled properly. By maintaining a hospital pharmacy quality control program, the health sector can be enriched.

Prospect of Pharmacists in Patient Management Service and Telehealth Care

At present, Hospital Pharmacy has created enormous job opportunities, where graduate pharmacists play a vital role in patient rearing, rehabilitation, and wellness. A professional pharmacist or a pharmacy apprentice at a clinic, hospital, and community care can determine what to do in a given disease situation if guided properly by another medical personnel. The country has a huge opportunity to recruit these pharmacists at Telehealth Care.

In each call, a pharmacist can provide both appropriate and quality information from the most recent medical systems. Studies show that the lack of proper medication management leads to higher healthcare costs, longer hospital stays, morbidity, and mortality. Further, it was reported that one in every five hospitalizations was related to post-discharge complications and about seventy percent were related to proper use of the drug.

In 2017, the World Health Organization committed to minimizing serious, avoidable drug-related harm over the next 5 years. Pharmacists' interventions to prevent drug-related problems at three community hospitals in California saved approximately 0.8 million USD in a year [29]. The estimated annual cost of medication error-based illnesses and deaths worldwide was USD 500 billion due to non-compliance with the clinical intervention and quantities in 2016. Also, the authors estimate that more than 275,000 people die every year for the same reasons [30]. A pharmacist can use simple and non-medical terminology to set the goal for patients to understand the information as well as to fulfill the prescription by proper request. With chronic conditions such as cardiovascular and respiratory diseases, there is ample evidence of the effectiveness of the tele-pharmacist for remote monitoring, communication, and consultation [31]. In addition, psychotherapy can also be operated through telehealth as part of behavioral health [32]. The pharmacy-related needs of pandemic patients have similarities with the traditional patient population, but with a different emphasis [33].

For example, when providing consulting services to patients, instead of focusing on medications as usual, their queries relate primarily to the knowledge of medical prevention and basic details on COVID-19, such as mask selection and standard COVID-19 signs and symptoms, symptomatic treatment options, breathing difficulties or cough management in comorbid situations, reinforcing behaviors that limit the spread of the pandemic, including social distancing and remaining in the home whenever possible through phone calls/video conferencing [34,35]. Earlier, Student pharmacists served as an

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effective educational resource for patients regarding the H1N1 pandemic [36].

Conclusion

Overburdened by patient loads and the explosion of new drugs, physicians turned to pharmacists more and more for drug information, especially within institutional settings. They obtain medical and medication history, check medication errors including prescription, dispensing and administration errors, identify drug interactions, monitor ADR, suggest individualization of dosage regimen, provide patient counseling, etc. [37]. Among chronic disease patients, particularly those under quarantine, there is a greater challenge in the supply of drugs and compliance with medications, although the safety and effectiveness of care is still critical for these patients. Stronger data on the effectiveness of this area of pharmacy care, together with a critical assessment of its limitations, can raise awareness among the actors involved about its potential and could contribute to wider dissemination of tele-pharmacy services in the public interest [38].

In the end, it can be said that pharmacists can play a role in both medical aids and regulation. Similarly, in tele-healthcare, professional pharmacists can play an essential role that has not been recognized yet due to a lack of proper initiatives. We hope that policymakers of Bangladesh are aware of its potential and contribute to the wider promotion of tele-pharmacy services in the interest of the citizenry.

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Conflict of Interest

The author declares that he has no competing interests.

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