

A Survey Based Approach to Determine the Momentous Role Played by the Community Pharmacy during COVID-19 Pandemic

Role Played by Community Pharmacists During the COVID-19 Pandemic

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Abstract: Corona virus disease has put mankind into a healthcare tailspin. In this unprecedented catastrophic event Community Pharmacist and their teams are serving as backbone to healthcare system. The main aim of this survey was to create awareness and highlight roles and additional activities undertaken by community pharmacist amid Covid-19 pandemic via survey-based approach.

Methodology: An online survey was conducted in Pune, India. The link of online survey forms along with awareness video was circulated amongst Pharmacist and Non-Pharmacist through various digital platforms. Responses submitted by participants were collected and analyzed electronically using Google Forms and Microsoft Excel respectively.

Results and Discussion: In these times of uncertainty and confusion Community Pharmacists helped in disseminating the right information, sharing reliable resources, treatment of minor ailments and many more. A higher number of the pharmacists (76.4%) felt that the facility of COVID-19 testing when provided at Pharmacy store will help in rapid testing and tracking of patients.

Conclusion: The study demonstrates overview of major roles and activities taken up by Community Pharmacist having significantly impacted lives of patients. Also, lacunae in current system and areas of improvement are addressed.

Index Terms - Covid-19, Community Pharmacist, Non-pharmacist awareness, survey.

I. INTRODUCTION

The novel corona virus has hit the world like an unpredictable thunderstorm. On March 11, 2020 the World Health Organization declared this as a Global Pandemic [1]. Over 8.0 Million confirmed cases (reported by WHO on 18/06/2020 5:30 GMT) the Corona virus disease (Covid-19) was announced as Public Health Emergency of International Concern by World Health Organization [2].

To prevent the spread of Corona virus Disease and to protect ourselves from it, the best way is to be well informed about the disease, its spread and how it is caused. Also washing our hands on a timely basis and avoiding contact with our face and mouth are some of the guidelines suggested by the World Health Organization to [3].

This unprecedented catastrophic event has put mankind in healthcare tailspin. Physicians along with other healthcare providers are under grave difficulties to provide care and coverage to people [4]. In stretching Covid-19 pandemic along with escalating plethora of falsify news and misinformation all around; Community Pharmacists were found to be the right person to act as a reliable and accurate source of information [5].

Pharmacists can play a very important role in disaster management across 4 major phases i.e., prevention, preparedness, response and recovery [6]. According to Indian Pharmaceutical Association there are around 6, 50,000 community pharmacies in India [7]. With over widespread networks, Community Pharmacist and their teams can serve as backbone to healthcare system [8, 9]. They are easily reachable and often first touch point of patient engagement [10, 11].

The primary focus of the study was determining the roles played by a community pharmacy during this unprecedented event of the pandemic by a survey-based approach. On the other hand, what roles did the community pharmacist perform during the unavailability of a physician, advances that can be made in future & probability of initiating COVID-19 testing center were surveyed [12, 13, 14, 15, 16]. Lastly the roles of a community pharmacy were enlightened by a video.

II. MATERIALS AND METHODS

The meetings and discussions among the team members were carried out using online platforms ZOOM and WhatsApp. Survey forms were created using Google Forms. The awareness video content was created and edited using Adobe Premiere Pro Software.

The survey aimed to target Pharmacists and Non-pharmacists within the Pune city as its participants.

Later, the data was collected in Google Sheets. Analysis and interpretation of data was performed in Microsoft Office Excel. The statistical analysis was performed using an online resource Social Science Statistics Chi-square calculator.

2.1 Study period

As the number of cases of COVID surged daily, an online survey was conducted in June 2020 amid the lockdown without infracting social distancing.

2.2 Study design

Thorough literature survey from research articles, news reports, official websites of National and International organization such as World Health Organization (WHO); Indian Pharmaceutical Association (IPA); International Pharmaceutical Federation (IPF) paved way to design a survey form of 15 questions. The form was divided into three sections. The first section was directed towards opinion and responses from Non-Pharmacist or Students studying Pharmacy whereas second section collected responses from Pharmacist. After submitting the response of respective sections participants were directed to third section which included an awareness video. Following questionnaire was designed and used for the study:

For Non-pharmacists / Students Studying Pharmacy:

- Do you belong to urban or Rural area?
- Are there any Chemist and Druggist/ Pharmacy stores near you?
- Are you aware of Community Pharmacy and their roles?
- Are you aware of number of pharmacies in India and other foreign countries?
- Is your approach towards a pharmacist as a business person or a person with proper knowledge of drugs?
- Does the Pharmacist encourage you to practice frequent hand washing, practice social distancing and covering your nose and mouth with mask during Covid-19 pandemic?
- Does the Pharmacist in your nearby Pharmacy store educate and advice you on use of medications prescribed to you?
- Does the pharmacist keep note of your Blood pressure, glucose, cholesterol and family history of diseases to monitor your health and progress?
- Which of the following facilities are provided by Pharmacy stores near you during Covid-19 Pandemic? (participant can choose from the following options)
 1. COVID-19 Testing
 2. Electronic prescription services
 3. Home delivery of medicines
 4. Sharing reliable resources with you to educate and provide information about Coronavirus
 5. Have official website or social media page of the store

For Pharmacists:

- Are you aware of the services provided by community pharmacy in foreign countries?
- Are you allowed to do therapeutic substitution (replace and give a drug from the same class) and generic substitution (for cost reduction)?
- Do patients ask questions about medication, side-effects, duration of medication, disease condition?
- How can you help to spread awareness during COVID-19 pandemic? (participant can choose from the following options)
 1. Educating people about the current situation
 2. Explaining importance of social distancing
 3. Creating awareness via your official store social media page/ website
- In case of Covid-19 pandemic/epidemic do you feel that Corona virus testing centers can be organized in a pharmacy?

2.3 Awareness Video Creation:

The video was created with an intention of creating an awareness regarding facilities and guidance that can be provided by Community Pharmacist to ameliorate stretching Covid-19 Pandemic.

2.4 Questionnaire Administration:

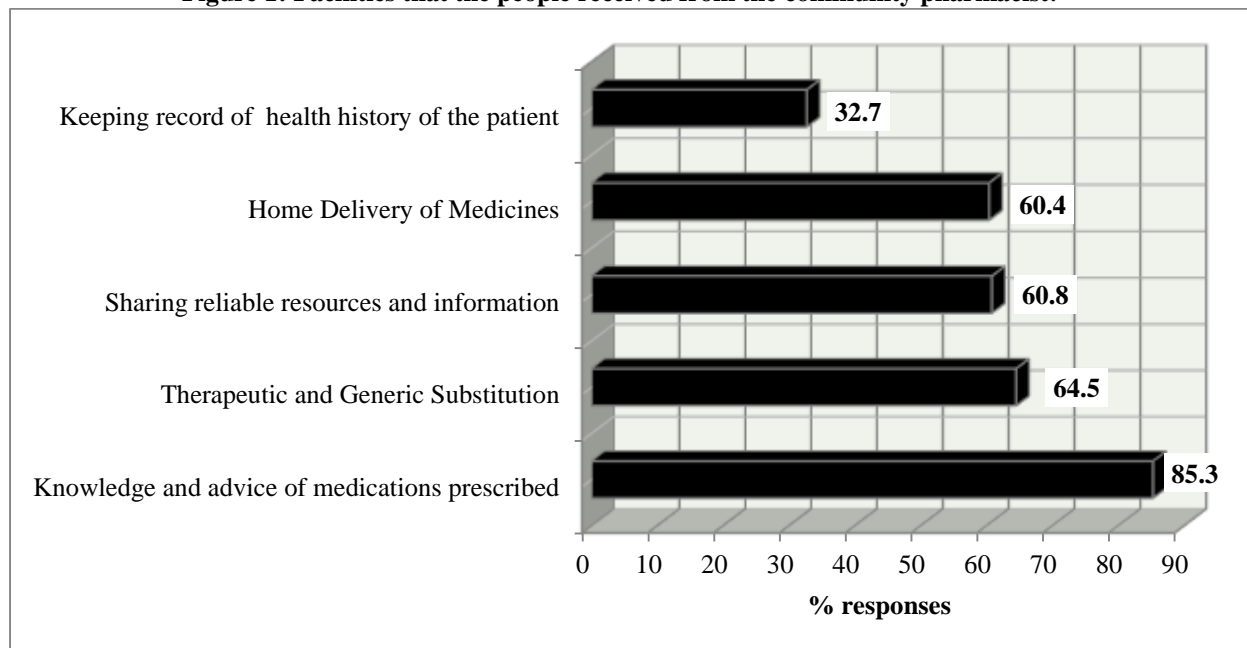
The link for survey form and video was circulated to target participants via Social Media Platforms -WhatsApp group.

2.5 Data Collection and Analysis:

The data from the survey was collected in Google Sheets and the transferred to Microsoft Office Excel where the analysis and interpretation was done. Lastly Pearson's Chi-square test was used to perform statistical analysis of data at significance level $P < 0.05$. This helped us in determining the significance and independence of the data based on the p value obtained.

III. RESULTS

The total participants in the survey were 327 out of which 120 (36.7%) were Pharmacists and 207 (63.7%) were Non-Pharmacists.

Figure 1: Facilities that the people received from the community pharmacist.**Table 1: Facilities that people received from Community Pharmacy.**

Serial No.	Facility that patients received from the community pharmacy	% response
1.	Knowledge and advice of medications prescribed	85.3
2.	Therapeutic and Generic Substitution	64.5
3.	Sharing reliable resources and information	60.8
4.	Home Delivery of Medicines	60.4
5.	Keeping record of health history of the patient	32.7

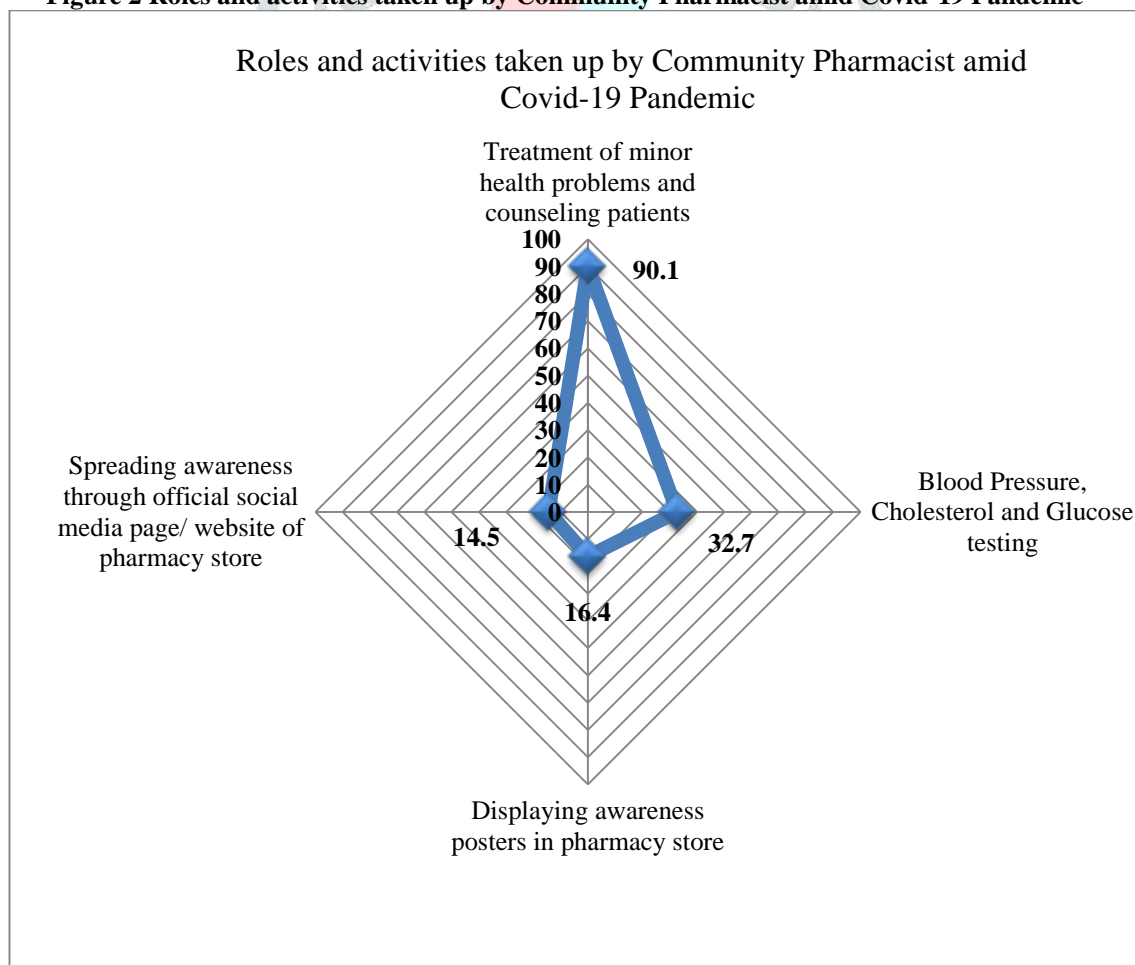
Figure 2 Roles and activities taken up by Community Pharmacist amid Covid-19 Pandemic

Table 2 Roles and activities taken up by Community Pharmacist amid Covid-19 Pandemic

Serial No	PARAMETER	% response by Pharmacist
1.	Treatment of minor health problems and counseling patients	90.1
2.	Blood Pressure, Cholesterol and Glucose testing	32.7
3.	Displaying awareness posters in pharmacy store	16.4
4.	Spreading awareness through official social media page/ website of pharmacy store	14.5

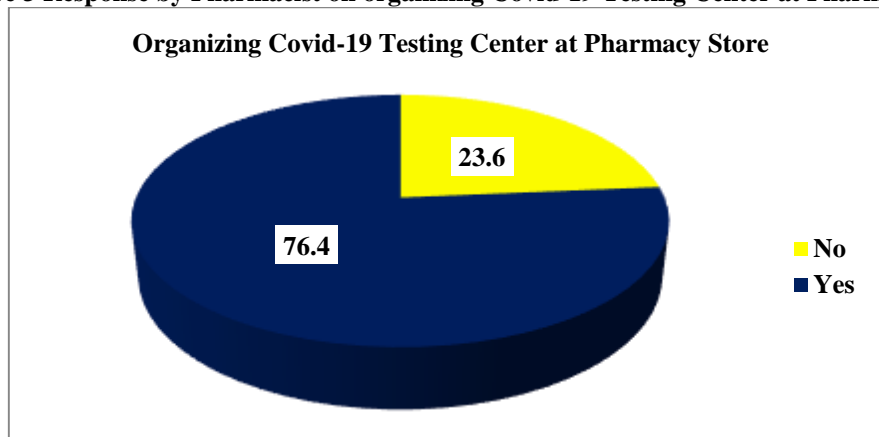
Figure 3 Response by Pharmacist on organizing Covid-19 Testing Center at Pharmacy.

Figure 1 and Table 1 represent the facilities that the people received from the community pharmacist.

Secondly, **Table 2 and Figure 2** represent roles and activities taken up by the community pharmacist amid the COVID-19 pandemic.

From the survey it was apparent that 87.6% Pharmacist encouraged people to practice frequent hand washing, maintaining social distancing and covering nose& mouth with mask in public places to ward off transmission of Corona virus.

With Over 650000 Community Pharmacies across India unfortunately half of the total respondent (Pharmacist-49.1% and Non-Pharmacist – 61.3%) were unaware of wide-spread network of community Pharmacies. (P value = 0.035164, at significance = $P < 0.05$)

About 60.4% pharmacies provided home delivery of medicines which not only helped in maintaining strict lockdown conditions but also minimized contact of patients with healthy people. Over 90.1% community pharmacist provided treatment to minor health ailments of patients. On the other hand, only, few Pharmacies monitored patient health (about 32.7%) and provided facilities for Blood pressure, cholesterol and Glucose testing (Figure 2 and Table 2).

As evident from the survey over 90.3% people refer Community Pharmacist as a person with proper knowledge of drugs, can treat minor health problem and counsel them rather than just a businessman dealing in drugs and medicines. People find it easy to approach Community Pharmacist as their primary healthcare provider.

However, more than half of the pharmacist (60.4%) respondents prefer using traditional interpersonal communication while over small number of pharmacist (14.5%) used official website and social media pages to spread awareness amongst people.

A significant thing that the survey depicted was 76.4% pharmacists believed that COVID-19 testing should be performed in a community pharmacy.

IV. DISCUSSION

The unforeseen event of COVID-19 has given a significant blow to the mankind. During this event of the pandemic pharmacists have acted upon to play a very remarkable role.

The mist of the pandemic brought a lot of misinformation and confusion spreading all around. The spread of wrong information led to panic among the people. So, to tackle this 60.8% of the pharmacists played a crucial role by sharing reliable resources and information.

Pharmacies being the first point of reach that were open even during strict lock downs acted as primary healthcare providers. 90.1% of the pharmacists played a noteworthy role in treating the minor health problems of patients thus reducing the load of the healthcare system. In addition to this 85.3% of the pharmacists gave knowledge and advice on medication. Both these tasks helped the patients significantly when the physicians were unavailable during the pandemic.

COVID-19 being a disease that could easily be spread by respiratory droplets coming in contact it is very important that people cover their nose and mouth with masks, practice frequent handwashing, and maintain social distancing. 87.6% of the pharmacists encouraged and motivated people to practice this.

60.4% of the non-pharmacists surveyed received home delivery of their medicines. This facility provided by the community pharmacists helped in a very positive way as it prevented the vulnerable patients from encountering the virus.

Awareness about the pandemic could be spread using technology i.e. official social media pages/ websites of the pharmacy store. But only 14.5% of the community pharmacies practiced this. Promoting the use of digital platforms can help pharmacists target a greater audience. Pharmacists can not only help in educating patients but also counseling can be encouraged over online platforms.

Many people visited the community pharmacies during the lockdown for their inevitable needs. Awareness and information could be given to them by displaying posters in the pharmacy store. A mere number that is 16.4% of the pharmacies practiced this.

Preventing visits to the hospitals was a very important thing as it could reduce the risk of a patient to encounter the virus. To aid this 32.7% of the community pharmacies kept the record of health history of the patients and provided facilities like Blood Pressure, Glucose and Cholesterol testing. However, the numbers are not so noteworthy they can be improved upon soon. Not more than 8.3% of the pharmacies provided COVID-19 testing facilities. The number can be incremented as 76.4% of the pharmacists felt that COVID-19 testing facility should be implemented in a pharmacy this is because of the widespread network and being the first point of contact for patient engagement; rapid tracking and testing of patients can be achieved in stretching COVID-19 pandemic.

V. CONCLUSION

In Nutshell, Community pharmacists and their teams played a significant role in spreading awareness, disseminating authentic information and providing treatment to minor ailments. Necessary facilities like home delivery of medicines have proved to be of great help for patients.

Providing COVID-19 testing facility and active use of online platforms have turned out to be lacunae in current system. Also, many pharmacies lack the facility of Blood pressure, glucose and cholesterol testing. These improvements if made can turn out to be a master stroke in the services provided to the healthcare system by the community pharmacy.

VI. CONFLICTS OF INTEREST

The authors express no conflict of interest. There are no financial or other relationships that might lead to conflicts of interest

VII. ACKNOWLEDGMENT

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