Original Research Article

# Healthcare seeking behaviour during the COVID 19 lockdown in an urbanized village in Delhi: A cross-sectional study

**Aritrik Das[1], Yukti Bhandari[2], Geeta Pardeshi[3], Anita Khokhar[4], Jugal Kishore[5]**

*[1]Senior Resident, Department of Community Medicine & School of Public Health, PGIMER Chandigarh, India*
*[2]Senior Resident, Department of Community Medicine & School of Public Health, PGIMER Chandigarh, India*
*[3]Associate Professor, Department of Community Medicine, Vardhman Grant Medical College, Mumbai, India*
*[4]Director Professor, Department of Community Medicine, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi, India*
*[5]Director Professor and Head of Department, Department of Community Medicine, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi, India*

**Received: 19-10-2021 / Revised: 17-12-2021 / Accepted: 11-01-2022**

## Abstract

**Introduction:** In response to the COVID pandemic, the government of India announced a country-wide lockdown on 25th March,2020, extended till 31st May,2020. Fear in the community about accessing non-COVID services would have affected healthcare-seeking behaviour.

**Methodology:** UHTC(Urban Health Training Center),Aliganj caters to 6000 population, in an urbanized village of South Delhi. We used a pre-designed, semi-structured questionnaire on sociodemographic details and health-seeking behaviour on adults who regularly sought health care from UHTC. We used systematic random sampling to select patients attending UHTC during November-December 2020 and analysed the data in SPSS.

**Results:** Of 218 patients,198 required consultations during the lockdown. 116(58.5%) accessed an alternate government health facility,58(29.2%) accessed a private clinic, while 2(1%) opted for teleconsultation. 113 patients reported to have not taken the medication previously prescribed from UHTC. Reasons cited were unavailability of medicines in pharmacies[49(43.3%)], drugs were expensive[47(41.2%)] and migration to the village where the medicine was unavailable[17(15%)].

**Conclusions:** More than one-fourth of the study population visited private clinics during the lockdown for consultations. 44.3% of the patients bought medicines from private pharmacies resulting in out-of-pocket expenditure. There was low uptake of telemedicine services. Unavailability and cost were barriers to taking prescribed medication during the COVID 19 lockdown.

**Keywords:** COVID-19, lockdown, Health seeking behaviour



## Introduction

Mainland China witnessed a cluster of cases of pneumonia in December 2019, which was later confirmed to be caused by the novel coronavirus 2019, renamed the SARS-COV 2 virus, because of its similarity to the SARS virus from almost 20 years ago[1]. The World Health Organization declared COVID-19 as Public Health Emergency International Concern on January 30, 2020 and a global pandemic on March 11, 2020 [2]. The number of confirmed cases have crossed 600 million worldwide with over 6 million deaths as of September, 2022. In India, the numbers are not optimistic, with over 44 million cases and 500,000 deaths to date [3]. After a 14-hour "Janata curfew" on 22nd March, 2020, the Government of India ordered a nationwide lockdown on 24th march for 21 days. The lockdown was then extended to 3rd May, with a conditional relaxations after 20th April for the regions where the spread had been contained or was minimal. On 1st May, the Government of India extended the nationwide lockdown further by two weeks until 17th May. The Government divided all the districts into three zones based on the spread of the virus—green, red and orange—with relaxations applied accordingly. On 17th May, the lockdown was further extended till 31st May by the National Disaster Management Authority. On 30th May, it was announced that lockdown restrictions were to be lifted, but it would be further extended till 30th June for the containment zones[4].

Healthcare seeking behaviour(HSB) has been defined as, "any action or inaction undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy"[5]. Studies demonstrate that the decision to engage in a particular health-seeking behaviour is influenced by a variety of factors such as socio-economic status, sex, age, the social status, the type of illness, access to services and perceived quality of the service[6,7]. Access to health facilities, socio-economic status and perceived quality of service have been found to be significant influencers of health seeking decisions among different population segments[8,9,10]. Inappropriate HSB has been linked to worse health outcomes, increased morbidity and mortality and poorer health statistics[11,12].

The emergence of COVID-19 has affected the economy globally by directly affecting production in key countries that are sole manufacturers of raw materials, intermediate products, and consumer goods, thereby creating supply chain and market disruption, and by its financial impact on firms and the financial markets[13]. Unprecedented circumstances like the COVID-19 pandemic and lockdown have affected the non-Covid services throughout the country, especially in the containment zones[14]. Availability of medicines from government and private supply points were affected during this time period. Evidence from countries with previous epidemics has revealed that people lose trust in the healthcare system and develop a fear of getting the disease in a health facility. Thus, they avoid seeking treatment for their illness or sending a loved one

*Correspondence
**Dr. Aritrik Das**
Senior Resident, Department of Community Medicine & School of Public Health, PGIMER Chandigarh, India
**E-mail:** dasaritrik@gmail.com

for medical care, the consequences of which may be increased mortality [15].

Aliganj is an urbanized village in South Delhi, populated by both permanent residents and migrants. The area was a containment zone for a major time during the lockdown with regular healthcare service delivery being affected at the time. The Urban Health Training Centre (UHTC) was also closed during this period. Availability of medicines and other health care services from the regular sources was erratic. It is important to study the healthcare seeking behaviour of the population during the lockdown and identify gaps that need to be addressed if a similar situation arises again in the future.

**Materials and Methods**

UHTC (Urban Health Training Center), Aliganj is a field practice area of the Department of Community Medicine, Vardhman Mahavir Medical College & Safdarjung Hopsital, caters to over 6000 population, in an urbanized village of South Delhi. Due to the area being declared a containment zone, the UHTC was closed during the months of April to June. We conducted a cross-sectional study among patients attending UHTC during November-December 2020. The study included patients above 18 years age and the caretakers of patients below 18 years, who regularly sought health care services from UHTC, Aliganj. Severely ill patients and patients requiring urgent referral to higher centre were excluded from the study.

The sample size was calculated based on an estimated prevalence of not taking previously prescribed medication at 50%, due to paucity of literature on the topic in India, and a relative error of 15%. It was rounded up to 200 with 10% non-response rate. Systematic random sampling was used to select patients attending UHTC during November-December 2020. Approximately 40 patients attend OPD at UHTC, Aliganj every day during this period. Data was collected from 10 patients each day. Every 4th patient attending the OPD was recruited for the study and 218 participants were included in the study. Data was analyzed in SPSS licensed version 21.

A pre-designed, semi-structured questionnaire was used with questions on sociodemographic details, health-seeking behaviour and patient perception about services and safety of the UHTC during the COVID-19 pandemic. Modified Kuppuswamy scale (2020) was used to determine socioeconomic status of the study participants, with the information collected on the corresponding head of household's education, occupation and monthly family income.[16]

Ethical clearance for the study was obtained from the Institutional Ethics Committee of Vardhman Mahavir Medical College & Safdarjung Hospital, New Delhi. Each subject enrolled in the study were explicitly explained about the purpose of the study by the interviewer and an informed written consent was obtained prior to inclusion. Data collected during the study has been used for the academic purposes alone and no personal information of the study subjects were disclosed to anyone, thus privacy of subjects and confidentiality of information was maintained and this was also be explained to the subjects, prior to inclusion.

Data was checked for errors and missed values, and then the corrected data was entered in Microsoft Excel. Data analysis was done using SPSS software licensed version 21. Descriptive analysis was done and results were expressed using appropriate tables and figures.

**Results**

Of 218 patients, 118 (54.1%) were male and 100 (45.9%) were female. The mean age of the study participants was 43 years (SD=14.2 years), ranging from 18-80 years. Table 1 shows the sociodemographic details of the study participants.

**Table 1:** Sociodemographic Characteristics of Study Participants (N=218)

| **Age (in years)** | Frequency, % |
|---|---|
| 18-25 | 24 (11) |
| 26-35 | 56 (25.7) |
| 36-45 | 50 (23) |
| 46-55 | 48 (22) |
| 56-65 | 26 (12) |
| 66-75 | 10 (4.5) |
| 76-85 | 4 (1.8) |
| **Marital Status** | |
| Single | 24 (11) |
| Married | 178 (81.7) |
| Divorced/Separated/Widowed | 16 (7.3) |
| **Occupation of Participant** | |
| Professionals | 3 (1.4) |
| Technicians and Associate Professionals | 2 (0.9) |
| Clerks | 8 (3.7) |
| Skilled Workers and Shop & Market Sales Workers | 40 (18.4) |
| Skilled Agricultural & Fishery Workers | 17 (7.8) |
| Craft & Related Trade Workers | 26 (12) |
| Plant & Machine Operators and Assemblers | 3 (1.4) |
| Elementary Occupation | 27 (12.4) |
| Unemployed | 92 (41.9) |
| **Education of Participant** | |
| Graduate or Higher | 17 (7.9) |
| Intermediate or diploma | 22 (10.1) |
| High school certificate | 45 (20.7) |
| Middle school certificate | 54 (24.4) |
| Primary school certificate | 39 (18) |
| Illiterate | 41 (18.9) |
| **Family Income** | |
| ≤ 10,001 | 30 (13.8) |
| 10,002–29,972 | 126 (57.8) |
| 29,973– 49,961 | 50 (22.9) |
| 49,962–74,755 | 10 (4.6) |

| | |
|---|---|
| ≥ 199,862 | 2 (0.9) |
| **Type of Family** | |
| Nuclear | 178 (81.3) |
| Joint | 40 (18.7) |
| **Number of Family Members** | |
| 1 | 3 (1.4) |
| 2 | 15 (6.8) |
| 3 | 33 (15.1) |
| 4 | 67 (30.7) |
| 5-9 | 96 (44.1) |
| >=10 | 4 (1.9) |
| **Socioeconomic Status (Modified Kuppuswamy Scale 2020)** | |
| Upper (I) | 2 (0.9) |
| Upper Middle (II) | 12 (5.5) |
| Lower Middle (III) | 105 (48.2) |
| Upper Lower (IV) | 88 (40.4) |
| Lower (V) | 11 (5) |

Out of the 218 patients, 198 reported to have sought consultations for their health during the lockdown, and 20 did not seek consultations for their health during the lockdown. Out of those who sought consultations,116 (58.5%) accessed an alternate government health facility, 58 (29.2%) accessed a private clinic, while 2 (1%) opted for teleconsultation. 88 (44.3%) of the patients bought medicines from private pharmacies and 78 (39.4%) from government supply points (Table 2).

**Table 2:** Distribution of study participants according to healthcare seeking behaviour (N = 218)

| Main source for your advice and consultation for health-related issues during lockdown (N=198) | Frequency, % |
|---|---|
| Alternate Government Health Facility | 116 (58.5) |
| Private clinic | 58 (29.2) |
| Pharmacy | 20 (10.1) |
| Teleconsultation | 2 (1) |
| Non allopathic | 2 (1) |
| **Main source for any medicine during lockdown (N=198)** | |
| Private pharmacy | 88 (44.3) |
| Govt hospital supply | 78 (39.4) |
| After migrating back to hometown/village - Govt/pharmacy in hometown/village | 15 (7.6) |
| Others | 17 (8.7) |

A total of 113 (51.8%) patients reported to have not taken the medication previously prescribed from UHTC. The reasons cited were unavailability of medicines in pharmacies [49 (43.3%)], drugs were expensive [47 (41.2%)] and migration to the village where the medicine was unavailable [17 (15%)] (Figure 1). Out of 87 patients with non-communicable diseases, 38 (43.7%) procured medication from private pharmacies and 37 (42.5%) from govt supply, while 6 (6.9%) stopped taking prescribed medicines (Figure 2).

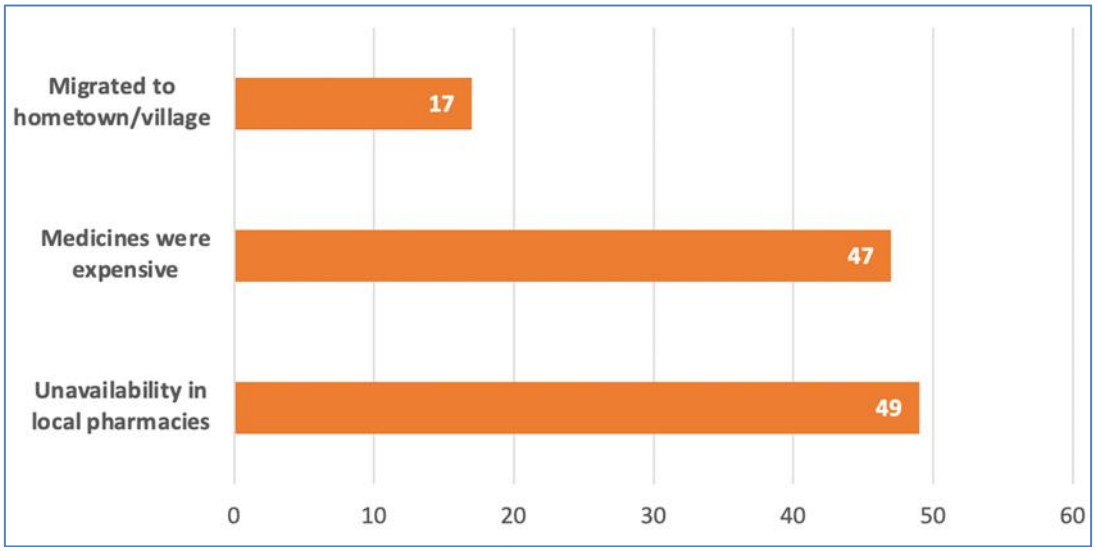


**Figure 1:** Reasons cited by study participants for not taking previously prescribed medication (n=113)

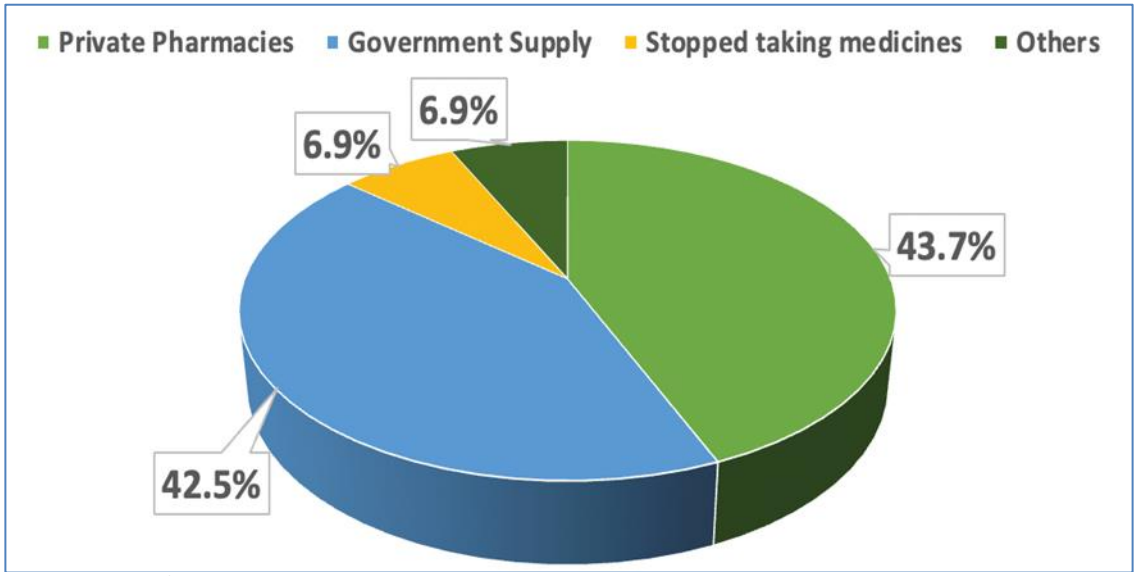


**Figure 2:** Distribution of study participants with Non-communicable diseases according to their health-seeking behaviour during the lockdown (n=87)

Out of those who had sought consultation from a private clinic during the lockdown, 47 (81%) were satisfied with the services at the UHTC while 50 (86.2%) perceived visiting the UHTC as safe during the COVID-19 pandemic (Table 3). Among the entire study population, 161 (73.7%) were satisfied with services and 174 (79.8%) perceived the UHTC to be safe to visit for consultation during the COVID-19 pandemic. Of those attending the UHTC, more than a quarter (26.3%) were not satisfied with the services and 20% did not perceive the services to be safe.

**Table 3:** Distribution of patients according to satisfaction with services and perception of safety at UHTC, Aliganj during the Covid-19 pandemic

| Satisfied with services | Perceived visiting UHTC as safe during Covid-19 pandemic |
|---|---|
| Among the study population (n=218) | |
| 161 (73.7%) | 174 (79.8%) |
| Among patients who had accessed a private clinic during the lockdown (n=58) | |
| 47 (81%) | 50 (86.2%) |
| Among patients who bought medicines from private pharmacies during the lockdown (n=88) | |
| 68 (77.3%) | 70 (79.5%) |

**Discussion**

More than one-fourth of the study population visited private clinics during the lockdown for consultations they would have otherwise obtained at UHTC. In a study conducted by Akilu et al. in Ethiopia, almost three-fourth of the patients missed one or more follow ups and 12% missed their medications [17]. Fear of COVID-19, lack of transportation and pocket or insurance payment for treatment were found to be significant reasons for the same. In a qualitative study conducted by Saah et al. in Ghana, it was found that respondents had become more health conscious and checked for COVID symptoms more frequently. However, similar to the findings of our study, the health seeking behaviour for other ailments deteriorated during the time of the pandemic.[18] According to a report from Kerala by Kuruvilla et al. to identify the paradigm shift in healthcare seeking behaviour, OPD attendance of new and follow-up cases fell by almost one-third. The findings showed that deferring and delaying of non-COVID care, manifested as a behavioral change toward addressing the health problem in the common man.[19] According to Saah et al. one of the reasons for poor health seeking behaviour was fear of contracting the disease from the healthcare facility or on contact with doctors.[18]

44.3% of the patients bought medicines from private pharmacies resulting in out-of-pocket expenditure. Unavailability and cost of medicines were barriers to taking prescribed medication during the COVID 19 lockdown. This is similar to the study from Ethiopia, where 59% reported that pharmacies did not have the required medicines, and 26% reported increased price of medicines. There was low uptake of telemedicine services. Though, on 25 March, 2020, NITI Aayog released technical guidelines on Telemedicine Practice [20], and eSanjeevani was launched by the Govt. of India on 9th August, 2020 [21], it was still found to be mostly inaccessible to the study population, either due to lack of knowledge of the services, or a lack of technical know-how. Of the total population in India, a modest 36% has access to internet in the country.[22]. There is need for better advertising of the telemedicine services, to improve coverage among the study population, so that more may avail the same if a similar situation arises in the future. The fear of being diagnosed with COVID-19 was also found to be a major barrier to healthcare seeking in a survey done in Nigeria during the pandemic.[23] As seen in our study, majority of patients returning for consultation at UHTC Aliganj, including those who had resorted to alternate sources for medicines and health related consultations, found the services at the UHTC satisfactory and safe to visit during the pandemic.

This cross-sectional study analyzes only those who have returned to avail services at the UHTC after the lockdown. Though it offers a view into the healthcare seeking behaviour of the community, a truer picture can be obtained by conducting a community based study including those who have not yet returned to avail services at the UHTC. The study was conducted after the lockdown was over, and some recall bias cannot be avoided.

Data from the Health Management Information System showed a major drop in healthcare facility utilization as early as March and April of 2020, with curtailing of maternal healthcare, immunization, outpatient treatment (50% of January levels), in-patient treatment of

communicable diseases (by 60% as compared to January) and even fewer emergencies [24]. In conclusion, government health care facilities need to provide satisfactory non-Covid services in a manner that is perceived as safe by the community to encourage them to seek timely and appropriate consultation. In case of a similar situation in the future, the supply of medicines from the government supply points should remain uninterrupted to ensure that patients do not stop or alter prescribed medications. Patients, especially those suffering from NCDs, need to be counselled to emphasize the importance of being compliant to prescribed treatment. Steps should be taken to monitor prices of essential medicines in private pharmacies, especially during such emergencies, to reduce out-of-pocket expenditure for the patients.

**Highlights**

- Regular delivery of non-COVID services was affected during the lockdown and the community had to resort to alternate sources for healthcare advice.
- Unavailability of medicines, increased prices and discontinuity in regular care led to many being non-compliant with their prescribed medication.
- In case of a similar situation in the future, government health care facilities close to the community need to maintain essential services and ensure continued supply of essential drugs in a manner that is perceived as safe and satisfactory by the intended beneficiaries.
- Special focus needs to be placed on those on treatment for chronic non-comunicable diseases to ensure continued compliance to treatment and control of disease.

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**Conflict of Interest: Nil Source of support: Nil**