

A Quick Assessment of Medicines and other Food items used by COVID-19 positive (+ve) persons at home

Report

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EXECUTIVE SUMMARY:

WHO declared COVID-19 disease to be a public health emergency of international concern, characterized as a pandemic⁴ which is more than an epidemic. Till date, no drugs or biologics have been approved by the FDA for the prevention or treatment of COVID-19. Numerous other antiviral agents, immunotherapy, and vaccines continue to be investigated and developed as potential therapies. Searching for effective therapies for COVID-19 infection is a complex process⁵.

In Bangladesh, anecdotally it is said that common patients of COVID-19 did not follow with the WHO guideline. They have been utilizing different modalities of treatments ranging from allopathic treatments to treatment given by unauthorized persons quite often termed as local healers and practitioners. In the recent past, there have been numbers of stories of COVID-19 survivors or warriors in the newspaper and other media. However, it is not clear how the confirmed cases are being treated at home, how they manage to get a consultation from doctors, what medicines they are getting from the Government or if they are procuring medicines on their own, which treatment protocols they follow, what kind of alternative medicines or ancillary services or “POTTHYO” they are getting, what indigenous knowledge they are getting or being practiced, what precautionary measures are being taken by the caregivers at home, etc³.

There is a scarcity of the health service providers (represented by the data that, only 0.3 doctor and 0.17 nurses are there for 1000 people in Bangladesh⁷). In the country, most of COVID-19 patients prefer home treatments. That is why there has been a need to understand the treatment arrangement, medicines and alternative medicine used commonly in managing COVID-19 patient at home set up. To understand the home-based COVID-19 care and treatment management a qualitative study was conducted between 04 June 2020 to 30 August 2020 interviewing COVID-19 +ve patients who stayed at home and got well and also by interviewing a few providers who helped these patients.

In this study, in-depth interviews (IDIs) were conducted based on the administration of a semi-structured questionnaire (Annex – 1) and an informed consent (Annex – 2) used among the confirmed COVID-19 positive (+ve) patients over telephone. After quite a bit of effort 101 interviews could be completed of which 66.6% respondents were from urban and 33.4% were from rural areas. The interviews were conducted by trained 4 junior female doctors. The objectives of the assessment/study were to investigate: a) What kinds of the treatment regimen, medicines used commonly in treating confirmed COVID-19 patient at home set up; b) Duration of the different drug used by the positive persons; c) Alternative medicine and practices; and “POTTHYO” used in helping the recovery of patients; d) Institutional or community or societal mechanism for supporting (or de-stigmatizing) COVID-19 patients in securing the treatment at home; and e) Precautionary measures taken at home so that rest of the family members does not get infected.

The mean age of the respondents was 31.3 ± 10.9 years and most of the respondents were educated as about 63% of the respondents have completed their graduation level of education. The

respondents were predominantly Muslims (94%), with 5% being Hindu or the followers of “Sonaton” or indigenous religion and 2% were Catholic Christians. The income levels of the respondents were of moderate quintile. It was found that among the males a large proportion of the COVID-19 +ve patients were doing some kind of a job (private service, Government service, and Police) whereas the females mostly were homemakers and Nurses (Fig –1).

Fever was the most frequent symptoms of our responders, almost 71% of interviewees had a fever during their illness. The second most common symptom was generalized weakness followed by cough and sore throat. Seventeen out of 101 interviewees reported that they had a loss of smell (Table -3) and 23 out of 101 confided that they had suffered from Aguesia (loss of taste).

It was found that on an average the respondents spent Tk. 12, 000 for the cost of medicines etc. during their illness due to COVID-19 (Table -4). The reason for such a huge amount of money had been the high cost of the medicines and at times the specific medicines were not available in the pharmacies.

All of the patients interviewed took Paracetamol followed by different Vitamins such as Vit. C, B and A. In the study antibiotics particularly Azythromycin has been taken by almost 70% of the patients followed by Doxycycline in 10% and Chloroquine and Hydroxychloroquine in about 9% of the patients. Very few of the patients mentioned of taking other antibiotics such as Amoxicillin, Levofloxacin and Amoxicillin plus Clavuronic acid etc. In very few cases the positive patients have used hydrocortisone and Ivermectine.

All the participants took precautionary measures and supplementary food besides taking medicine and regular foods. Some participants reported multiple precautionary measures/ practice during the infection period. Hot water gargling (84%), and steam inhalation (79%), drinking hot water (76%) out to be the most used items by the +ve patients, followed by breathing exercise (35%), free hand exercise (10%) and prone breathing (20%).

There had been lots of challenges in this study of which full address and telephone numbers collection was the biggest one. The positive persons had a lot of questions and at the end, only 101 respondents gave complete interviews.

COVID-19 infection and its scourge are not going away from the country. Common people will continue to suffer and as such everyone should come up with ideas how to alleviate the sufferings of the common people. The recommendations thus coming out of the study is that the Government should have a thorough review of how and what +ve patients are doing while staying at home. The findings of this study will help the Government in taking the next step of doing the national level review and develop future guidelines.

Although Bangladeshi's are used to a bad habit of obtaining any kind of medicines without prescription also evidenced in this study and as such people should be made aware that many of the medicines taken are un-necessary and have not been proven to be effective in curing COVID-19 and have side effects and, in that case, they should know what steps should be taken.

Taking of vitamins, different kinds of fruits and spices are certainly of no harm but may be some nutritionist could develop a list of the most important and essential ones and those could get on to the national guidelines.

Many of the precautionary measures used by the positive persons are very helpful such as the respiratory exercises but currently not being promoted by the Government. These should get incorporated in detail in the National Guideline for the Care and Management of COVID-19 Infections.

Background:

Humans have suffered from lethal infectious diseases, including viral outbreaks, over and over again. Severe, acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is a newly identified virus that differs from severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) but can cause similar symptomology associated with pneumonia. This viral disease was named “COVID-19” by the World Health Organization (WHO) and was first recognized in Wuhan, Hubei Province, in China in December 2019. Although the route for viral transmission remains a mystery, SARS-CoV-2 may have originated in an animal reservoir, likely that of the bat and may originate from eating wildlife, an established tradition in the oldest of human cultures. Subsequent to its introduction in Thailand, the virus has spread to more than 200 countries and territories. WHO declared this disease to be a public health emergency of international concern, characterized as a pandemic⁴.

Till date, no drugs or biologics have been approved by the FDA for the prevention or treatment of COVID-19. Remdesivir gained emergency use authorization (EUA) from the FDA on May 1, 2020, based on preliminary data showing a faster time to recovery of hospitalized patients with severe disease⁵. Numerous other antiviral agents, immunotherapy, and vaccines continue to be investigated and developed as potential therapies. Searching for effective therapies for COVID-19 infection is a complex process⁵. Director-General of Health Services (DGHS) of Bangladesh has published guidelines and reviews of pharmacotherapy for COVID-19. It incorporates different strategies to manage COVID-19 patients, however, in Bangladesh patients are not stick with this guideline at all. They have been utilizing different modalities of treatments range from allopathic treatments to treatment given by unauthorized persons quite often termed as local healers and practitioners.

According to the WHO Bangladesh COVID-19 Morbidity and Mortality Weekly Update (MMWU) 22, on 27th July 2020, there are 226,225 confirmed COVID-19 cases in Bangladesh, including 2965 related deaths since 8th March 2020 and Case Fatality Rate (CFR) is 1.31%⁶.

Among 1 million of Bangladeshi population, only 6602 rtPCR tests have been undertaken to identify the COVID-19 cases in a day and positive detection rate was 20.1%⁶. Though the Attack Rate (AR) was 1,328 per million the recovery rate (55.6%) was sanguine⁶. About 17.6 million calls have been made at health-related helpline services seeking consultation for COVID-19 and

hospital admission rate was only 6.69%⁶. It is overwhelming that almost 90% of positive patients have been taking treatment at the home settings⁶. Also, along with the recommended medical treatments in-home setting patients are depending on the food supplements, traditional healing alternatives, Alternative medicines (Homeopathy or Herbal Medicines) as well as the substances given by the Spiritual healers.

In the recent past, we came across the number of stories of COVID-19 survivors or warriors in the newspaper and other media. However, it is not clear how the confirmed cases are being treated at home, how they manage to get a consultation from doctors, what medicines they are getting from the Government or if they are procuring medicines on their own, which treatment protocols they follow, what kind of alternative medicines or ancillary services or “POTTHYO” they are getting, what indigenous knowledge they are getting or being practiced, what are the precautionary measures are being taken by the caregivers at home, etc³.

Rationale of the Assessment:

The highly infectious attribute of the disease COVID-19 demands quarantine of the patients and as most of the patients suffer from a mild form of the disease patients need to stay at home and seek telephonic consultation. On the other hand, due to the scarcity of the health services (represents by the data that, only 0.3 doctor and 0.17 nurses for 1000 people in Bangladesh⁷) in our country, most of the COVID-19 patients prefer home treatments. It is now a dire need to understand the treatment arrangement, medicines and alternative medicine used commonly in treating COVID-19 patient at home set up, “POTTHYO” used in help recover patients; and the institutional, if any; or community or societal mechanism for supporting COVID-19 patients. This understanding can be generated by undertaking a quick assessment of the above arrangement by interviewing treated patients who stayed at home and by interviewing a few providers who helped these patients. This critical knowledge is absent at the moment, and this will help DGHS to come up with an institutional arrangement and community and society to build up a support system in their respective community. This will also help COVID-19 positive persons to get a safer protocol avoiding the use of unnecessary medicines which may also be causing side effects and adverse reactions.

Objectives:

The assessment had the following objectives to investigate:

1. What kinds of treatment regimen, medicines are commonly used in getting well in confirmed COVID-19 positive patients at home set up;
2. Duration of the different drug use;
3. Alternative medicine and practices; and “POTTHYO” used to help in recovery of the patients;
4. Institutional or community or societal mechanism for supporting (or de-stigmatizing) COVID-19 patients in securing the treatment at home.

5. Precautionary measures are taken at home so that rest of the family members does not get infected.

Operational definitions:

COVID-19 patient: A patient who has been tested positive by PCR test done at any laboratory listed by DGHS.

Home set up: A confirmed COVID-19 positive patient who chose to stay at home in a separate room or a shared room, however, not in any hospital or any other facility, such as designated COVID-19 Hospital, designated Isolation Center, etc., provided by the Government.

Treatment regimen: treatment suggested by any qualified doctor over the phone (e.g. from 333, 16263, or any other telemedicine site provided free of cost), suggested by any qualified doctor instead of payment, or as a courtesy being relatives, friends, or referred etc.; or just by listening from others experiences being gathered over the phone, social media or any other means.

Medicines: Medicines which are commonly known as allopathic medicines; approved by the DG Drugs Control for sell in the market. Medicines may include items recommended by the national guidelines issued by DGHS, used to alleviate symptoms, control of anticipated secondary infection, tackle complications, medicines that may help boost immunity, different vitamins (especially C and D), minerals (especially Zinc), etc.

Alternative medicine and practices: These would include Unani, Ayurvedic and Homeopathic medicines; indigenous practices, herbal medicines in the medicinal or raw form e.g. black seed (Kalijira or Nigel Seed), honey, ginger, garlic, lemon, orange, etc.; steam inhalation, steam inhalation with menthol or tincture iodine or any pungent medicine, etc.; gargle with warm water, or warm saline water, etc.

POTTHYO: This is a Bangla word. POTTHYO includes food and drinks especially prepared for recovery or quick recovery of patients in addition to family food. Examples may include (not an exhaustive list) fruit juice of sour taste like lemon juice in sugar syrup (Sherbet), squeezed or blended orange juice of different types, soup, high protein diet, eggs served in different formats, smashed black seed (vorta) or black seed (“kala jira” or Nigel seeds) mustard oil; tea of different flavor or mixed with ginger, green tea, lemon tea, warm water boiled with different spices, etc.

Precautionary measures: These measures include isolating patient in a separate room within a home; the arrangement of providing food, all kinds of medicines and POTTHYO as mentioned above with frequency, i.e. what measures patient and family members undertook to provide them to the patient; precautionary measures are undertaken by the serving family members for protecting themselves, precautionary measures are undertaken by the patient not to infect the near and dear ones or serving family members; channel of communication between the patient and family members, how did the patient maintain social and spiritual well-being; etc. In addition, how the precautionary measures are being taken when home size is not adequate enough to allocate a single room for the patient, or earmark a toilet for the patient, etc.

Methodology:

A qualitative study was conducted using in-depth interviews (IDIs) based on a semi-structured questionnaire (Annex – 1) and an informed consent (Annex – 2) obtained from the confirmed COVID-19 positive (+ve) patients over the telephone. It was planned that from 7 Divisions 30 persons/patients would be interviewed, and Dhaka division would have double the number of in comparison to other divisions. Similarly 10 – 15 providers were planned to be interviewed. Due to possible non-response, the list of patients was at least three times that was expected. From the IDIs data were extracted and a list of drugs used with the duration compiled. From that compiled list and other findings a Report has developed with analysis and comments; and recommendations for the DGHS and MOHFW.

Results/Findings:

Number of Respondents:

The plan was to interview 50 positive (+ve) cases from each of the 8 Divisions = 400 cases. Through the courtesy of the Divisional Public Health Expert Advisors complete name and address of 287+ve cases were received which was 71% of the total addresses obtained. On an average 3 phone calls were made to each of the 287 +ve cases which accumulated a total of 894 phone calls in this study. Of the 894 phone calls we ended up with 101 complete interviews (12%) and data of these +ve persons/patients were analyzed. The detail socio-demographic background information of the respondents is given in Table – 1. Of the respondents, 66.3% were from urban areas and 33.7% from rural places.

Socio-Demographic details of the respondents:

Table – 1: Participants Socio-Demographic Information

	Female (N=46)	Male (N=55)	Overall (N=101)
Age			
Mean (SD)	31.1 (10.7)	31.6 (11.1)	31.3 (10.9)
Median [Min, Max]	28.0 [17.0, 62.0]	30.0 [2.50, 65.0]	29.0 [2.50, 65.0]
Education			
Below HSC	5 (10.9%)	16 (29.1%)	21 (20.8%)
Below SSC	8 (17.4%)	7 (12.7%)	15 (14.9%)
Graduate	25 (54.3%)	26 (47.3%)	51 (50.5%)
Post graduate	8 (17.4%)	5 (9.1%)	13 (12.9%)
Missing	0 (0%)	1 (1.8%)	1 (1.0%)
Religion			

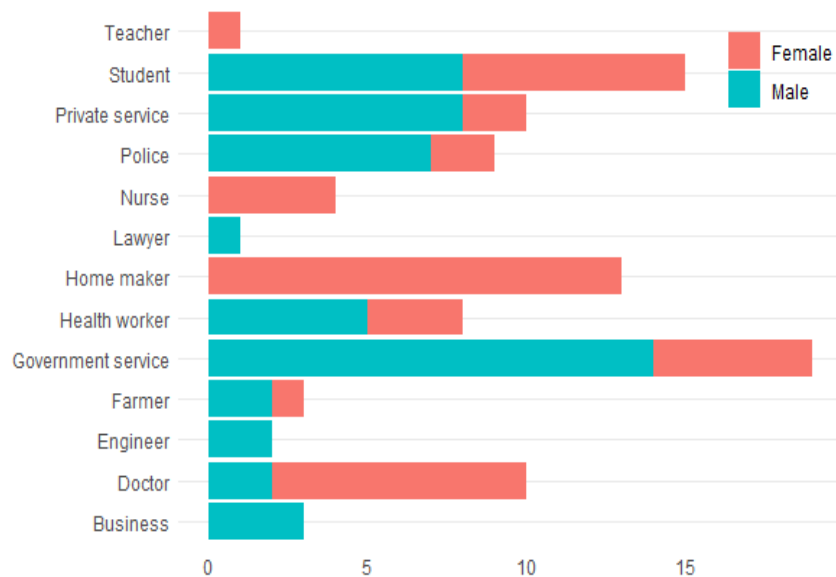
	Female (N=46)	Male (N=55)	Overall (N=101)
Catholic	1 (2.2%)	1 (1.8%)	2 (2.0%)
Islam	43 (93.5%)	51 (92.7%)	94 (93.1%)
“Sonaton”/indigenous	2 (4.3%)	3 (5.5%)	5 (5.0%)
Marital Status			
Married	31 (67.4%)	41 (74.5%)	72 (71.3%)
Unmarried	13 (28.3%)	12 (21.8%)	25 (24.8%)
Widow	2 (4.3%)	0 (0%)	2 (2.0%)
Widower	0 (0%)	1 (1.8%)	1 (1.0%)
Missing	0 (0%)	1 (1.8%)	1 (1.0%)
Income			
30K-60K BDT	19 (41.3%)	20 (36.4%)	39 (38.6%)
61K-100K BDT	6 (13.0%)	3 (5.5%)	9 (8.9%)
Less than 30K BDT	14 (30.4%)	22 (40.0%)	36 (35.6%)
More than 100K BDT	6 (13.0%)	4 (7.3%)	10 (9.9%)
Missing	1 (2.2%)	6 (10.9%)	7 (6.9%)

The mean age of the responders was 31.3 ± 10.9 years and most of the respondents were educated, about 63% of the responders have completed their graduation level of education. Most of the infected people in this study were young and educated. Interestingly, in our study it has been observed that the most of the participants were married which is 72% of the total respondents. The respondents were predominantly Muslims (94%), with 5% being Hindu or the followers of Sonaton religion and 2% were Catholic Christians.

In terms of the monthly income of the respondents, it comes out that only 36% interviewees earned less than 30k BDT per month whereas about 58% interviewees earned more than 30k BDT per month. In this assessment, there was no low socio-economic background persons getting infected by COVID-19 virus.

It was found that the number of employed males was larger than the female participants. Majority of the male participants (86%) were employed of which 26% worked in Government service, 15% were in the private sector, 13% were police, and 9% health worker. Whereas of the female participants, 28% were homemaker and 15% of students. Rest of the female participants was working women: 17% doctor, 11% government employee, 9% nurse, 7% health worker etc. (Figure 1).

Fig – 1: Profession of the respondents by sex



Signs and Symptoms of the COVID-19 +ve persons:

Almost half (49.6%) of the COVID-19 infected participants in this study reported having signs and symptoms between 7-15 days. Of the total participants, 43.6% recovered within 7 days or less. Only 6.9% suffered for more than 15 days (Table -2). Based on this study participants' response, on an average, COVID-19 test results were available within 6 days. However, the reported duration of test confirmation varied at a wide range where for some test result was obtained within a day while for some it took more than two weeks (18 days). Also, in this study, 8% of the participants could not report how long it took for them to receive the test result (Table - 2).

Table - 2: Duration of Signs and Symptoms of COVID-19 +ve persons and Test confirmation duration

	Male (n= 55)	Female (n=46)	Total (n=101)
Duration of Symptoms (%)			
<7 days	22.0 (40.0)	22.0 (47.8)	44.0 (43.6)
>15 days	5.0 (9.1)	2.0 (4.3)	7.0(6.9)
7-15 days	28.0 (50.9)	22.0 (47.8)	50.0 (49.5)
Test confirmation duration (mean (SD))	6.0 (3.5)	6.10 (4.07)	6.1 (3.7)
Median [Min, Max]	5.0 [1.0, 15.0]	6.0 [0, 18.0]	6.0 [0, 18.0]
Missing	2.0 (3.6%)	6.0 (13.0%)	8.0 (7.9%)

Story 1: Tension, anxiety and fear almost killed Shafi (not the real name): Shafi works in a trading Agency. Suddenly while on the way home he felt something not right, head felt heavy and slight fever. At once came to mind of the dreaded virus, Corona going all around. He decided to isolate himself from the other family members. He could see the worry in his wife's face; children were asking is their father going to be alright, his old father wondered about his son. Anxiety and fear started to mount. After 2 days, he went to give sample for RT-PCR test. While waiting for the results he developed weakness, body ache, and loss of taste for all his favorite foods. Waiting for the results was the toughest. A few days later, the results came positive. Then began the treatment, lots of tablets and a capsule, after consulting a doctor over the phone. And also began the hundreds of advices from friends and well-wishers, but he decided to stick to the doctor's prescription.

He started drinking "masala" tea 3 times daily which soon became a boring thing. Maintaining distance from everyone, staying isolated in one room. At the same time, washing hands, gargling with hot water, wearing a mask, all these seemed too much of work. He started to pass sleepless nights. The thought of providing support to the family was constantly bothering him. Will there be a lay off? Will he be able to go back to his job? He lost counting days but meanwhile 14 days passed which he felt like 14 months to him. That gradually came to an end. He felt better, symptoms started to go away. He thanked Allah for not developing any complications which he had heard of so much. But the actual relief came when he tested negative on the 20th day.

Symptoms among the respondents:

Fever was the most frequent symptoms among the responders, almost 71% interviewees had a fever during there illness. The second most common symptom was generalized weakness followed

by cough and sore throat. Seventeen out of 101 interviewees reported that they had a loss of smell (Table -3) and 23 out of 100 confided that they had suffered from Aguesia (loss of taste).

Table 3: Symptoms by respondents

Symptoms	Frequency	Percentage
Anorexia	25	24.75
Anosmia	17	16.83
Breathlessness	14	13.86
Chest Pain	1	0.99
Chest tightness	7	6.73
Cough	46	45.54
Diarrhoea	13	12.87
Fever	71	70.30
Generalized weakness	51	50.50
Headache	14	13.86
Loss of taste	23	22.77
Malaise & body ache	35	34.65
Sore throat	44	43.56
Rash	1	0.99

Treatment information provided by the respondents:

On an average the respondents spent Tk. 12, 000 for the cost of medicines etc. during their illness due to COVID-19 (Table -4). Though it had not been articulated the reason behind this huge expense it would be burdensome for a person to spend almost 200 USD for the treatment of COVID-19 in a country that has got 2065 USD per capita GDP only.

Table 4: Covid-19 Treatment Information

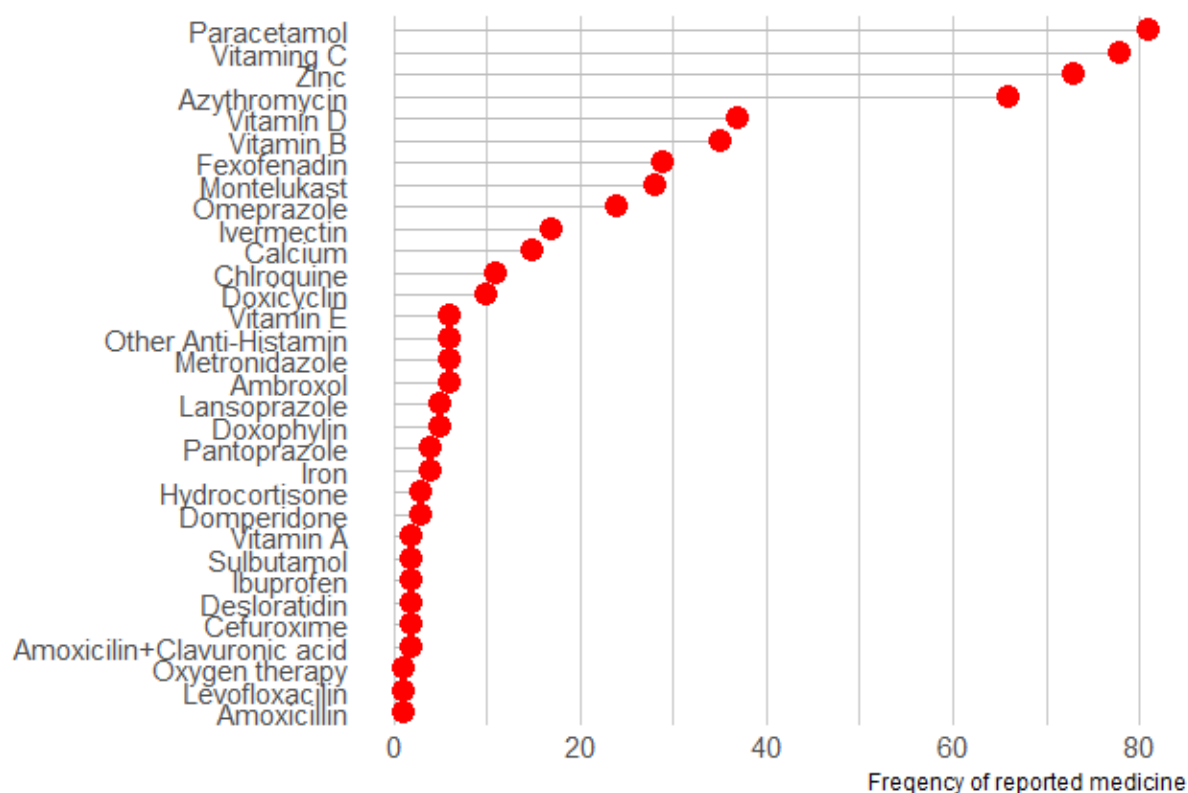
	Male	Female	Total
	(n= 55)	(n=46)	(n=101)
Treatment cost (Mean (SD))	23827.9 (37115.7)	13074.3 (12880.8)	18713.4 (28658.9)
Median [Min, Max]	12000.0 [0.0, 150000.0]	10000.0 [0.0, 55000.0]	12000.0 [0.0, 150000.0]
Missing	12.0 (21.8%)	7.0 (15.2%)	19.0 (18.8%)
Number of Medicine consumed (Mean (SD))	9.3 (3.5)	9.8 (3.8)	9.5 (3.6)
Median [Min, Max]	8.0 [3.0, 18.0]	9.0 [3.0, 19.0]	9.0 [3.0, 19.0]
Source of treatment information (%)			
Advice from Doctor at any social media	1.0 (1.8)	0.0 (0.0)	1.0 (1.0)
In-person consultation with Doctor	30.0 (54.5)	23.0 (52.3)	53.0 (53.5)
Self	4.0 (7.3)	2.0 (4.5)	6.0 (6.1)
Shaystho Batayon	0.0 (0.0)	1.0 (2.3)	1.0 (1.0)
Telephonic consultation with Doctor	20.0 (36.4)	18.0 (40.9)	38.0 (38.4)

Alternative treatment			
Ayurveda	2.0 (3.6%)	0.0 (0%)	2.0 (2.0%)
Homeopathy	5.0 (9.1%)	1.0 (2.2%)	6.0 (5.9%)
None	46.0 (83.6%)	45.0 (97.8%)	91.0 (90.1%)
	2.0 (3.6%)	Missing	2.0 (2.0%)

Interestingly, about 53% reported that they got in-person consultation with doctors (Table -4). On the other hand, about 38% of interviewees relied on the telephonic consultation with the doctors. Most of the respondents depended on allopathic medicine. Only 6% of the respondents took homoeopathic drugs and 2% considered the Ayurvedic treatment adjunct to the allopathic treatment (Table -4).

While the majority of the participants reported consultation with doctors, almost all of them reported taking paracetamol. Participants also reported different antibiotics as the treatment medication of which Azithromycin was the most common one (66%). Besides, participants found to take different types of vitamins: Vitamin C 78%, Zinc 73%, Vitamin D 37%, and Vitamin B 35%.

Fig -2: Medicines Consumed by the Respondents during COVID-19 infection



Supplementary and precautionary measures taken by the respondents

The respondents had consumed a lot of different kinds of supplementary food such as Ginger, high protein diet and lemon. They took these items as recommended by local physicians, relatives and friends.

Table 5: Frequency of different supplements taken by male and female participants

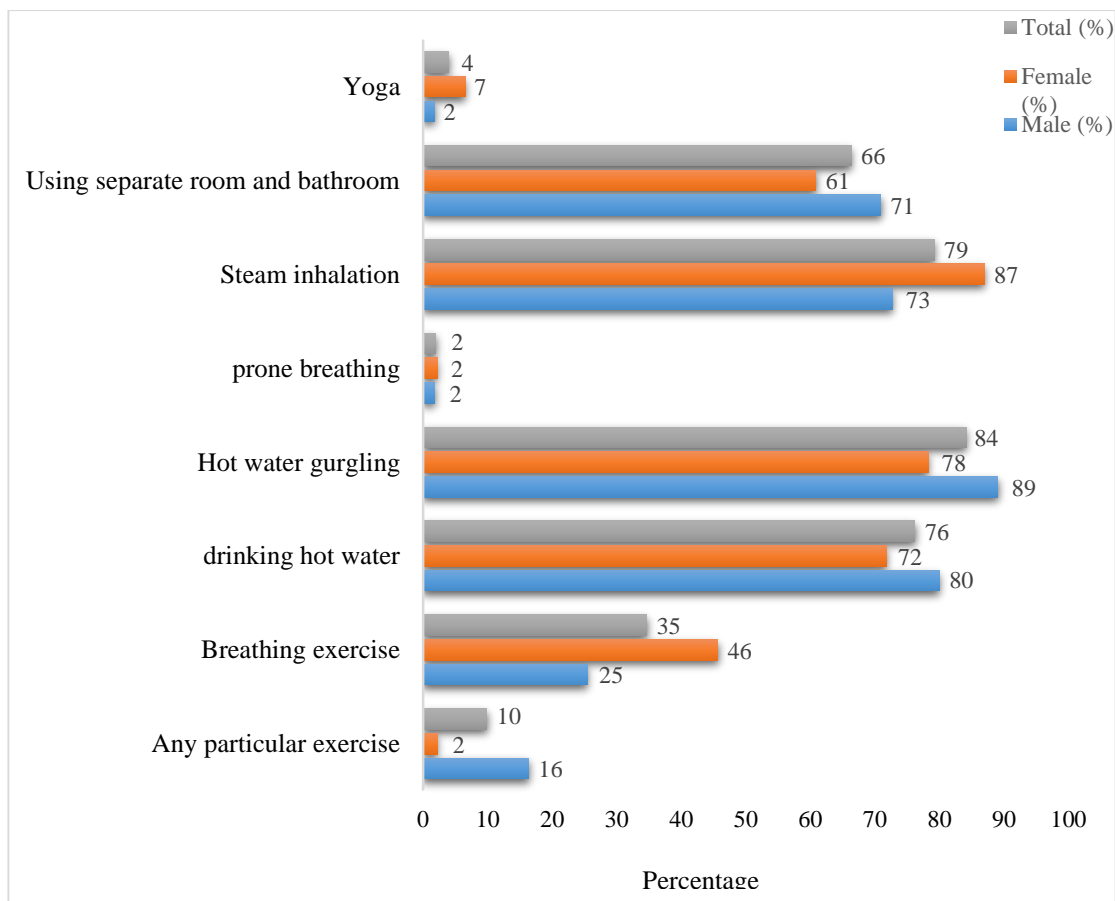
	Male N=55	Female N=46	Overall N=101
Lemon	48	45	93
High protein diet(Egg/Meat/Fish)	50	40	90
Ginger	46	38	84
Spice tea	39	32	71
Fruits	35	28	63
Nigella seeds	31	25	56
Cardamom	30	25	55
Clove	26	29	55
Cinamons	27	26	53
Lemon tea	29	23	52
Honey	22	23	45
Bay leaves	14	20	34
Garlic	20	14	34
Black pepper	13	13	26
Others	9	9	18
Tulsi leaves	3	4	7
Mustard oil	3	2	5
Turmeric	0	3	3
Green tea	0	2	2

Almost 90% of the respondents believed that a high protein diet would be beneficent for them. Almost all interviewee (n=93) took extra lemon to get rid out of this disease and 84% interviewees had taken ginger as a food supplement to counteract the deadly disease.

Story 2: Tender loving care and mental support is the winning point: Sheer simplicity and small happenings leaves us spellbound and mesmerized. Such is the story of a young couple Parul and Ahmed (not their real names) with two children living in a village about 2 Kms.. from the Upazilla HQs. Parul's husband a shopkeeper and a farmer tested positive for COVID-19. They could not find that from where the virus has come. The two children with their grandfather and grandmother moved to their uncle's house. Parul did not leave her husband. Many said that she would be infected but she stayed there with her husband and kept her vows. When asked, she said with a smile "where would I go, he's all I've got". Soon his husband developed diarrhea and became very weak. Parul became a real nurse. The whole period about 18 days till full recovery the couple stayed at their residence. Parul nursed his husband, cooked food and did everything she could do. But with the will of Allah Parul never felt sick and tested Corona negative along with her husband when he went to test again after the illness. According to Ahmed, this was all possible by the Almighty's blessings on Parul who was just an angel.

In the case of precautionary measures, participants reported taking multiple precautionary measures at a time. Of all precautionary measures, Hot water gurgling, steam inhalation and drinking hot water were the three most frequently reported that had been practiced by the 84%, 79% and 76% respondents respectively. Of the respondents 66% used separate room and toilet (Fig. 2). Though it has been believed that breathing exercise is very effective to obtain proper tissue level oxygenation but only 35 respondents could do it as a precautionary measure and it was mostly practiced by males (n=21). Whereas only 14 female respondents reported doing breathing exercise and the low uptake might indicate that the female respondents could not understand and follow the instructions.

Fig – 2: Precautionary measurement taken by the respondents across different sex



Only 66% of the respondents could stay separately and use a separate bathroom. In Bangladesh, the lower middle income and the poor have houses with multiple rooms and bathrooms. The respondents who did not have the opportunity to stay in a separate room at least had a separate bed and tried not to go closer to the other family members. They kept on wearing the mask even when they were inside the room. This helped in curbing the transmission of the virus.

Findings on social issues including stigma:

Almost all of the respondents (92.4%) did not tell their neighbors, friends and family members that they were infected and taking medicines. All of the household members were afraid that they may become infected. To avoid spreading fear and anxiety the infected persons stayed inside their houses.

In the case of 12 positive patients, Government officials put up a small red flag in the front wall of the houses of the positive patients. This act of the Government raised some local level fear and the community people started saying different negative things about the positive persons. This was not at all appreciated by the positive persons and their relatives. Besides having the red flag in front of the house the community people somehow started to come to know that the person who was not seen outside was infected and then rumors started flowing around. One of the common sayings in the community that spreads around is that the infected person must have done some kind of sin and the infection is the outcome of that. Community people are aware that this disease is highly contagious and as such deliberately stayed away from the sick person which turned out to be a good practice particularly in maintaining social distancing.

Findings of the discussion with a couple of Doctors:

According to the assessment/study protocol discussion was held with 3 Doctors, their names and whereabouts kept in anonymity. These Doctors are working in two Government Hospitals and one in a private Medical College Hospital and are attached/involved with the COVID-19 case management. They are aware that many of the COVID-19 +ve persons stay at home and recover without any problem. Very few people now come to the Hospitals for admission and treatment. This situation was different in April – June 2020. At that time there was a huge rush of patients coming to the Hospitals.

The discussion with the Doctors covered three areas namely, a) signs, symptoms and complaints with which the infected persons come to the Hospitals; b) what kind of medicines etc. taken by the +ve persons before admission; c) co-morbidities present in the +ve persons coming to the Hospitals. The findings of the discussion in the 3 categories as mentioned earlier are given below:

- a) Signs, symptoms and complaints with which the infected persons come to the Hospitals: Majority of the infected persons gave a history of fever couple of days back before coming to the hospitals and some have come with a fever. Most of them had a dry cough, irritation in the throat and sore throat. Many of them were asymptomatic but had come to the Hospital as they have tested positive after testing. Almost all of them had tension, anxiety

and fear that their situation would turn serious very soon. Most of the persons complained of weakness and a lethargic feeling. A small percentage complained loss of taste and anosmia. Very few persons (5% to 10%) complained of tightness in the chest, shortness of breath, difficulty in breathing and a smaller percentage having hypoxia. The recent +ve persons have come with the reports of CT scan of their chest with findings of having pneumonia. Most of the patients have come on their own and very few were referred by private practitioners or some smaller hospitals/clinics.

- b) What kind of medicines etc. taken by the +ve persons before admission: Almost all +ve persons coming to the Hospitals have had taken Azythromycin, Doxycycline, other broad-spectrum antibiotics and in some cases two antibiotics together. In the earlier +ve persons had taken Hydroxychloroquine and the recent persons have taken Ivermectine. Almost all had started taking an antihistamine in tablet form and cough syrup. Very few have started Favimipramid, prednisolone and blood thinner/low dose heparin. Many of the patients along with the allopathic medicines have started herbal medicines such as Tulsi, Nigel seeds, lemon, honey and regularly drinking warm water. Gurgling with warm water a couple of times during the day had been a practice in many of the patients.
- c) Co-morbidities present in the +ve persons coming to the Hospitals: Diabetes is the most common of the co-morbidity found in the persons coming to the Hospitals. Followed by this is hypertension, heart disease, asthma, kidney disease, arthritis and cancer of different organs. The persons having these diseases were on different medicines as prescribed by their doctors. Very few patients (2% - 3%) becomes critically ill and had to be transferred to ICU. Co-morbidities had no co-relation in the patients moving on to ICU.

Discussion:

This assessment has been a unique attempt of collecting information on what the COVID-19 +ve patients did in terms of taking medicines and special foods (POTTHYO) while staying at home. This is good evidence that a good number of COVID-19 positive patients did not want to get admitted to hospitals for treatment. Positive patients both males and females in the urban and rural areas relied on medicines given by the doctors and preferred to stay at their homes.

In this connection of home care and COVID-19 case management at home, WHO, CDC and guidelines developed by other international organizations were consulted and nowhere there were suggestions for use of medicines of any kind for the positive patients. According to the international guidelines, COVID-19 +ve patients at the very initial stage or being a mild case can stay at home. If the patient starts developing any of the 4 signs namely, a) trouble in breathing; b) persistent chest pain and feeling of some kind of pressure or tightness; c) starting to have confusion; and d) bluish lips and or face, should be referred to a Hospital. In our study about 21% of patients complained of breathlessness, feeling of tightness in the chest and having problem in breathing but continued to stay at home. The patients were not aware that these symptoms are the signs that their condition is turning from mild to moderate. Bangladeshis overall tends to delay in seeking treatment.

It is known that scientifically no drugs or medicines have been found to treat a virus-like COVID-19. There have been some literature where some medicines have been found to lower the viral load in the human body and as such helps in causing less damage to the body organs. For home care in the WHO and CDC guidelines is more to provide symptomatic treatment, adequate mental support, maintain adequate nutrition level, rest and sleep. Only for controlling fever use of paracetamol/acetophenone has been recommended. NSAIDs are strongly discouraged to be taken in febrile situations. In our study antibiotics particularly Azythromycin has been taken by 66% of the patients followed by Doxycycline in 10% and Chloroquine and Hydroxychloroquine in about 9% of the patients. Very few of the patients mentioned of taking other antibiotics such as Amoxicillin, Levofloxacin and Amoxicillin plus Clavuronic acid etc. In very few cases the positive patients have used hydrocortisone and Ivermectine.

According to the assessment the positive patients had to spend a large amount of money buying the medicines. The medicine sellers did a huge profit in selling the medicines in the absence of regulation and monitoring from the Government.

The patients during the interview said that they consulted local doctors or even Government physicians who verbally prescribed the medicines. On probing the patients in almost all of the cases did not mention the name of the doctors who prescribed the medicines. Very few doctor names could be obtained with almost no mobile phone numbers. Bangladeshis have a regular kind of practice/habit to buy any drugs even antibiotics without showing any prescription. The pharmacists or the drug sellers also do not ask for prescriptions and dispense drugs without any hesitation.

In the WHO and CDC guidelines for COVID-19 patient home care, particular emphasis has been given to take care of the existing co-morbid conditions such as diabetes, hypertension, any cardiac condition, kidney diseases, cancer etc. After that guidance is provided to avoid tension and anxiety, maintain good nutrition, undertake light exercises and ensure proper sleep and rest. In our assessment, the COVID-19 positive patients resorted to taking lots of lemons, spices such as black pepper, bay leaves, cardamom, cloves and cinnamon. The other foods taken by the patients included honey, Nigella seeds, some herbal medicines such as 'tulshi' leaves, ginger, green turmeric etc. These in Bangla are called 'Patthyo' or additional food supplements.

The positive patients while staying at home did lots of things which turned out to be helpful and supportive. All of the respondents took precautionary measures and supplementary food besides taking medicine and regular meals. Hot water gargling (84%), steam inhalation turned (79%), drinking hot water (76%) out to be the most used items by the +ve patients, followed by breathing exercise (35%) free hand exercise (10%) and prone breathing (2%).

This descriptive study finding reflects on Bangladesh COVID-19 management at home level. The study findings show that infected patients took different additional supplementary foods with some precautionary measurements. Available consultation with doctors or telemedicine or listening to IEDCR regular briefing seems to be useful as participants were not found to take any unhealthy food or unfounded precautionary measures. However, unnecessary medicine consumption was observed among the respondents. It might reflect that enough awareness raising focus was not given on medicine consumption for COVID-19 management.

Challenges faced in the assessment:

The assessment was carried out at the time when the COVID-19 pandemic was at its highest level of transmission. There were small and big challenges faced by the Data Collectors although all four were doctors. These challenges are mentioned below:

- a) The biggest challenge was getting complete addresses and telephone number of COVID-19 +ve cases. The Public Health Expert Advisors provided great support in this regard. Then at least 3 calls were made to the COVID-19 +ve patients and after quite a bit of effort, only 12% completed the interview. Interviewing anybody over the telephone when both end people are not known to each other is a big challenge.
- b) The respondents were almost all of them hesitant to give an interview over the telephone. The Data Collectors explained the background, purpose and the usefulness of the information that would be collected from the assessment but even then it was quite hard to obtain the information from the respondents.
- c) None of the respondents wanted to tell the name of the doctors on whose prescription the respondents started taking medicines. In the case of the female respondents, some of the male members of her family brought the medicines and as such, they did not know the name of the doctor. Many of the respondents consulted more than one doctor and as such, they could not tell the name of a particular doctor.
- d) The Data Collectors got the feeling that the respondents were taking more medicines than what they mentioned.
- e) Interviewing doctors is almost an impossible task. Doctors, they do not have time, they are busy and they are the one who raised the legality of such an assessment. In the end, only a couple of doctors agreed to provide information.
- f) Time was the biggest challenge. Time is given for data collection, then compilation and analysis had to be completed within a very short period.

Suggestions/Recommendations:

The assessment/study Team would like to propose some suggestions/recommendations as following:

- a) Use of medicines/drugs:
 - The study was a small one however the use of medicines could be reviewed by some experts and then the SOP on National COVID-19 Case Management may be modified and some safe use of medicines could be proposed for all those who prefer to stay at home and get cured.

- The simple drugs were purchased at a high price. The government should look into this area and take some steps.
- b) Use of dietary supplements:
- People seem to be taking lots of lemon and citrus fruits, then they should not take many of the vitamins particularly Vit. C.
 - Some discussions are held with herbal medicine specialists and certain food can be recommended such as Nigella seeds.
- c) Use of certain measures:
- Use of respiratory exercise should be made mandatory.
 - All +ve patients should receive psychological/mental support in the form of counselling over telephone.

Research Team:

The study was coordinated by Dr. Abu Jamil Faisel (being a member of the BHW Working Group worked as a volunteer without taking any honorarium from the assessment). The overall concept was reviewed by and the study was guided by Prof Saidur Rahman Khasru of BSMMU (being a member of the BHW Working Group also worked as a volunteer without taking any honorarium from the assessment). A multi-disciplinary team comprising of postgraduate professionals from medicine, nutrition and other allied disciplines helped in developing the questionnaire and in conducting the interviews. Qualitative analysis was also done by the research team with the help of a Public Health professional who has the experience of doing qualitative analysis. Professionals from alternative medicine and statistics were also consulted during the design and draft review phase. The study/assessment Team as such consisted of the following:

Prof. Saidur Rahman (Khasru) – Principal Investigator (volunteer)

Prof. and Head of the Department
Department of Pharmacology, BSMMU

Dr. Abu Jamil Faisel – Coordinator (volunteer)

Public Health Expert Advisor of MOHFW, Sylhet Division

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MBBS (D.U), FCPS (Surgery), MRCS (Glasgow)

Dr. Md. Maksudul Islam Mazumder - Co-Investigator

FCPS (Medicine)

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M.Sc. (Nutrition), MPH, M.Phil. (Nutrition)

Dr. Sayeda Shabnam Malik - Co-Investigator
MBBS (DU), MD (Neurology), Specialist in EMG & EEG

Nusrat Jabin

B.Sc. in Public Health (AUW), M.Sc. in International Health and Tropical Medicine (Oxford University) – Data analyst

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The Research Team acknowledges with a deep appreciation of the financial support provided by the Bangladesh Health Watch (BHW). The financial support helped us to recruit doctors for data collection which certainly helped us in getting quality data and information. The respondents who were mostly convalescing after their recovery from the infection with COVID-19 provided us with the data without which we could not have developed this Report. Many thanks to them.

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Questionnaire for rapid assessment of the Symptomatic Covid-19 positive subject who got treated in home isolation

1. Introduction

Note for interviewer - During the current Covid-19 pandemic, people may be stressed, anxious or intimidated. A suitably amicable/ empathetic tone should be adopted, and only go forth if the respondent is agreed to contribute towards the research. If not, ensure that subject does not have the sense of remorse and express gratitude to them for their time.

Points to cover:

- **Introduction** - name, organization
- **Purpose of the call & objective of the research** –This is not a test. The purpose is to collect feedback which will help Bangladesh Health Watch (BHW) and other organizations responding to Covid-19
- **Expected duration** – suggest 15 minutes maximum
- **How the data will be recorded and used.** Information Collection Persons (ICPs) to provide information on (i) how data is being recorded (direct input to computer? audio?), (ii) how data is being stored (iii) who data will be shared with and for what purpose; (iv) whether they will be informed about the findings.
- **Ask if s/he has any questions**
- **Informed consent:** Ask if s/he is willing to participate in this study. Make it clear their involvement is entirely voluntary and they can stop the interview at any time. If yes, take verbal consent and ask if s/he is ready for the interview. If needed, reschedule the interview.

Note for ICPs - Usually verbal consent is OK if the participant receives an information sheet. However, if it is over the phone then there needs to be a consent script which should be read

out and include elements of a consent form – purpose, procedure, risk, benefit, etc, and the conversation would need to be documented in research file and note any issues.

2.Interview details	
2.1-Time of Interview	
2.2-Date of the interview	
2.3-Mode of Interview:	2.3.1-Mobile 2.3.2-Telephone 2.3.3-Video contact 2.3.4-In-person

3-Particulars of the Respondent			
3.1-Name			
3.2-Age			
3.3-Sex	3.3.1- Male 3.3.2-Female 3.3.3- Others		
3.4- Education	3.4.1-Below SSC 3.4.2-Below HSC 3.4.3 Graduate 3.4.4- Post graduate		
3.5-Occupation	3.5.1- Farmer 3.5.2-Police 3.5.3-Lawyer 3.5.4-Doctor 3.5.5-Teacher 3.5.6-Engineer 3.5.7-Business	3.5.8-Private service 3.5.8- Govenrment service	3.5.9- Agriculture officer 3.5.10- Nurse 3.5.11-Health worker 3.5.12- Home maker 3.5.13-Student
3.6-Religion	3.6.1- Islam 3.6.2-Sonaton 3.6.3- Buddhist 3.6.4-Catholic 3.6.5- Not specified		
3.7-Marital status	3.7.1- Married 3.7.2- Unmarried		

	3.7.3- Living with partner 3.7.4- Divorced 3.7.5- Widow 3.7.6- Widower
3.7-Address	
3.8-Mobile Number	
3.9- Monthly Family Income	3.9.1- Less than 30000BDT 3.9.2- 30000- 60000BDT 3.9.3-61000-100000BDT 3.9.4 more than 1 lac
3.10-Name of next to keen person(wife/husband/ Relative/Friend)	
3.11-Contact number of next to keen person	

4. Information regarding Flu (COVID-19)	
4.1-Duration of the presence of the symptoms	4.1.1- less than 7 days 4.1.2- 7-15 days 4.1.3- more than 15 days
4.2-Brief description of symptoms	4.2.1- Anosmia 4.2.2- Fever 4.2.3- Malaise and Body ache 4.2.4- Headache 4.2.5- Sore throat 4.2.6- Chest pain 4.2.7- Diarrhea 4.2.8- Rash 4.2.9- Breathlessness 4.2.10-Cough 4.2.11-Chest tightness 4.2.13- Generalized weakness 4.2.14- Dyspepsia 4.2.15-Anorexia 4.2.16- Loss of taste
4.3- Date of onset of the symptoms	
4.4- Date of test positive of the COVID-19	
4.5- Place where the respondent stayed during illness	
4.6-Name of the Medicines consumed during illness with dose. (Prompting may be done after the respondent has stopped his description)	4.6.1- Paracetamol 4.6.2- Ibuprofen 4.6.3- Chloquine 4.6.4- Ivermectin 4.6.5- Azythromycin 4.6.6- Doxycyclin 4.6.7- Hydrocortisone 4.6.8- Prednisolon 4.6.9- Amoxicilin+Clavuronic acid 4.6.10- Moxifloxacin 4.6.11- Fexofenadin 4.6.12- Desloratidin 4.6.13- Doxophylin 4.6.14- Omeprazole 4.6.15-Rabiprazole 4.6.16- Pantoprazole 4.6.17- Lansoprazole 4.6.18- Famotidin 4.6.19- Favipiravir 4.6.20- Enoxaparin 4.6.21- Rivaroxamine 4.6.22- Oxyzentherapy 4.6.23- Cefuroxime

	4.6.24- Levofloxacin 4.6.25-Anti-Histamin other than names mentioned above 4.6.26 Montelukast 4.6.27- Metronidazole 4.6.28- Domperidone 4.6.29- Sulbutamol 4.6.30- Amoxicillin 4.6.31- Ambroxol 4.6.32- Vit A 4.6.33- Vit B 4.6.34- Vit C 4.6.35- Vit D 4.6.36- Vit E 4.6.36- Calcium 4.6.37- Zinc 4.6.38- Iron
4.7-Detail about by whom all the medicines have been prescribed (By a registered physician after in-person consultation/from telephonic consultation from any authorized helpline/from any social media)	4.7.1- ShasthoBatayon 4.7.2- Help line of any Mobile operator company 4.7.3- Telephonic consultation with Doctor 4.7.4- In-person consultation with Doctor 4.7.5- Advise from Doctor at any social media 4.7.6- Medicine shop's salesmen 4.7.7- Pharmacist 4.7.8- Self
4.8 -Description of any alternative medicine consumed during illness)	4.8.1- Homeopathy 4.8.2-Ayurveda 4.8.3-Traditional healing substances 4.8.4- Unani medicine 4.8.10- None * If taken then try to include the name of the substance
4.9- Description of any food supplement 'Potthoy' consumed during illness	4.9.1-High protein diet(Egg/Meat/Fish)-amount 4.9.2-Ginger 4.9.3-Garlic 4.9.4-Nigella seeds 4.9.5-Lemon 4.9.6-Honey 4.9.7-Turmeric 4.9.8-Fruits (please specify) 4.9.9-Spice tea (masala chai) 4.9.10-Cardamom 4.9.11Cinnamons 4.9.12- Bay leaves 4.9.13- Clove, 4.9.14-Black pepper, 4.9.15-Tulsi leaves 4.9.16-Green tea 4.9.17-Lemon tea 4.9.18- Mustard oil 4.9.19- Others
4.10-Description of any 'Precautionary' measures that have been taken by the respondent	4.10.1- Hot water gurgling 4.10.2-drinking hot water 4.10.3-Steam inhalation 4.10.4-Yoga 4.10.5-Breathing exercise 4.10.6-prone breathing 4.10.7-Using separate room and bathroom 4.10.8-Any particular exercise 4.10.9-Others
4.11-Description of any substance that has been used given by any Priest/Chaplain/Imam/or any Spiritual influencer	4.11.1- Holy water 4.11.2- Holy Seeds 4.11.3- None

Name and Signature of the Interviewer with date and time

Annex-2

Consent Note

Consent to be taken after informing the patients following issues verbally:

1. The purpose of the study is to have an overall idea about the impact of Medical/Alternative/Supplementary treatments of homebound symptomatic COVID-19 positive individuals.
2. Only telephonic surveillance will be carried out to obtain an idea about the treatment of homebound symptomatic COVID-19 positive individuals irrespective of Age/Sex/Location.
3. All data will be kept confidential, other than the personnel involved with the study no one will have the access to the data. With the permission of the respondents data can be shared to other authorities.
4. There will be no risk of the respondents by participating in this study. However, public will get benefitted if the outcome of the study will get disseminated.
5. Respondents have the right to opt out from participating in any time during the study period. Their data will be kept confidential if respondent has opted out even in the midway of the study.
6. All the conversations will be kept recorded and if respondents have the obligation to get recorded then conversation will not be recorded.
7. Interviewer is obligated to answer any query of the respondent related to study. If the answer does not find up to the satisfactory level of the respondent, interviewer will not proceed further unless query can be answered by any investigator or co-investigator.

I have been told the foregoing information, or it has been read to me. I have had the opportunity to ask questions and I have been answered to my satisfaction. I consent voluntarily to participate as a participant in this Study.

Respondent has verbally consented to participate in the study.

If the participant has less than an expected standard of familiarity with language and literature or has little formal education, the consent note will be read in Bangla.