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ORIGINAL ARTICLE

Patients Behaviour During an Emergency Situation of a Pandemic and Recommendations for Safe OPDs from Public Health Experts in Post Pandemic Era: A Mixed Method Study from an Urban Community of India

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ABSTRACT

Introduction: The COVID-19 has changed how health is delivered around the world. The attitude of general public attending Out Patient Department (OPDs) at government sector is difficult to change even post pandemic and hence, the primary health care facilities need to follow stringent protocols to work, in order to ensure safety of both healthcare providers and patients.

Objective: To find out the attitude and practices of patients attending OPDs at a Primary health centre (PHC) of Faridabad during and post lockdown period in context of COVID 19 pandemic and to explore the experiences of public health specialists or medical officers at PHCs of India and their recommendations for safe working during post pandemic era.

Methodology: A partially mixed concurrent equal status study was conducted at a health centre of medical college situated in Faridabad, Haryana. Quantitative data was collected using an electronic form through interview and telephonic in depth interviews for qualitative data collection.

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Results: Total 225 patients were interviewed and Public health experts from five different zones across the country interviewed. Majority (38%) of the patients presented with acute respiratory illnesses symptoms. Most of them (65.3%) did not feel unsafe to visit the OPD amid of COVID 19. People belonging to more than 60 years or younger than 20 years differed from coming in for the OPDs. Those who attended were for chronic diseases refill or respiratory symptoms. Public health experts gave recommendations which were categorized under three main themes namely Infrastructural; Administrative and Innovative Changes.

Conclusion: During the imposed lockdown majority of patients who visited showed a positive attitude towards preventive measures. Infrastructural and administrative changes are required to provide enabling environment to patients and attendants to promote infection control.

KEYWORDS

• Primary Health • Covid-19 Lockdown • OPD Settings • Attitude and Practice of Patients • Public Health Expert

INTRODUCTION

Novel Corona virus has brought world to a standstill, all the sectors are affected by the pandemic, most hit being health sector. However, dealing with the present pandemic condition is a challenge for both health care workers as well as patients. It has also been made clear that lockdown cannot remain forever and will open up but the risk of getting infected will not be minimised unless various practices are adopted to ensure social distancing in daily activities.[1] The COVID-19 has also changed how health is delivered around the world including increase in patients seeking care for respiratory illness that could be COVID-19, deferring and delaying non-COVID-19 care, disruptions in supply chains, fluctuations in facilities' occupancy, absenteeism among staff because of illness or care giving responsibilities, and increases in mental health concerns.[2]

India has ~80% of its population living in the rural or semi-urban parts and largely dependent on the Primary health care facilities in the vicinity for immediate health care needs. Primary health care services at community level are essential part of health care system at all time. Presently there are 23673 Primary Health Centres (PHC) in India;[3] and as a country, formulation of guidelines and recommendations to safely open and operate PHCs is the need of the hour.

Infection prevention and control measures including staff testing may help prevent hospitals from becoming independent 'hubs' of SARS-CoV-2 transmission, and with appropriate precautions, organizations in all sectors may be able to resume on-site work safely.[4]

By following strict infection prevention recommendations, the risk of HCWs becoming infected with SARS-CoV-2 while treating patients can be minimized. As the COVID-19 pandemic evolves rapidly, these recommendations should serve as guidance and need to be interpreted based on local factors and availability of healthcare resources.[5]

The attitude of general public attending Out Patient Department (OPDs) at government sector may not change even post pandemic and hence, the primary health care facilities need to follow stringent protocols to work post lockdown, in order to ensure safety of both healthcare providers and patients. Attitudes and practices of general public attending at government Primary health care OPDs in conjunction with the dialogues with public health experts at such centres will provide a comprehensive data to formulate recommendations that can be considered for protocols to be followed in future i.e. Post COVID 19 pandemic at primary health care level of urban settings.

OBJECTIVES

1. To find out the attitude and practices of patients attending OPDs at a Primary health care centre of Faridabad during and post lockdown period (May, 2020-June, 2020) in context of COVID 19 pandemic.

2. To explore the experiences of public health specialists or medical officers at Primary Health centres of India regarding the behaviour of OPD patients during the pandemic and their recommendations for safe working during post pandemic era.

METHODOLOGY

Study Design: A partially mixed concurrent equal status design.

For Quantitative part, cross-sectional study design was adopted to find out attitude and practices of patients towards preventive strategies in context of COVID 19 pandemic and Qualitative part was conducted concurrently using Phenomenology approach.

Study Area: For Quantitative, OPD, urban health and training centre (UHTC) of ESIC Medical College, Faridabad and for qualitative, one In-depth interview each from the five zones of the country.

Study population: Due to paucity of literature on this subject the quantitative study did not have a minimum sample size. All the patients attending the centre in the stipulated time period were included for the quantitative part and for qualitative, Experts/Health Care providers from five zones of the country working in community medicine department in states: Delhi, Haryana, Gujarat, Kolkata, Bengaluru and Uttarakhand.

Exclusion criteria

1. Children less than five years of age.
2. All who are not willing to participate.

Ethical Consideration: The ethical approval was sought from Institutional Ethical committee at ESIC Medical College and Hospital, Faridabad (vide number 134/A/11/16/Academics/MC/2016/150).

Data Collection: *Quantitative study:* For understanding the attitude and practices of patients, data was collected by conducting face to face interview using pre designed semi structured questionnaire on electronic forms after taking informed verbal consent from the participants in the vernacular language and explaining the objectives of the study. The practices were mostly observed by the investigator, while the participant visited the OPD. *Qualitative study:* In-Depth unstructured telephonic Interviews were carried out concurrently by the researchers in five different zones across the country with the public health experts working at Primary health care setups with prior online consent via an email.

Data and Statistical Analysis: Quantitative study was analysed using Epi info version 7 and presented using frequencies and percentages. Chi-square test was used to study the association. The transcript prepared from In depth Interviews were coded, analysed manually by one of the authors trained in qualitative research methodology and descriptive results and recommendations were formulated. The transcripts were colour coded for the keywords and grouped under different heads to formulate the points for recommendations.

RESULTS

A total of 225 participants attended the OPD in the post lockdown period and consented to participate in the study. Among these most responses were directly from the patients while around 10 responses were given by patient attendants. Most of the patients (80.4%) who visited the OPD belonged to age group of 21-60yrs and fewer of younger (15%) and older age (4.4%) groups. Slightly higher proportion of (54.22%) females attended the OPD (Table 1). Majority (38%) of the patients presented with Acute Respiratory Illnesses/Influenza like Illnesses symptoms followed by chronic joint pain/body ache (20%), diarrheal disease (15%), skin problems (10%), gynaecological problems (8%), gastritis/abdominal discomfort (6%) and surgical problems (3%).

Table 1: Gender wise cases seen among different age groups between the period of May 2020 to June 2020 (N=225)

Age	Male	Female	Total	Chi-square, p value
5-20 yrs	15 (44.11)	19 (55.89)	34 (100)	
21-60 yrs	86 (47.51)	95 (52.49)	181 (100)	2.93, 0.23
>60 yrs	2 (20.0)	8 (80.0)	10 (100)	
Total	103 (45.78)	122 (54.22)	225 (100)	

Most of them (65.3%) did not feel unsafe to visit the OPD amid of COVID 19. Among those who visited 12.5% visited for regular check-up and refill of medicine for chronic illness, of which hypertension and heart disease were highest. Most patients (73.4%) came directly to the OPD without referring to any nearby chemist or consulting on phone for mild symptoms, and 26.6% came only on urgent or non-reliving of symptoms after medication from home remedies or local chemist shop.

In opinion of the treating doctor, 6.6% patients who attended the general OPD were in urgently in need of medical attention however most around 65% patients could have been easily managed at home or taken treatment from local chemist shop or treatment could have been differed till the lockdown to stay safe at home. (Table 2)

Table 2: Attitude of general public attending OPDsbetween the period of May 2020 to June 2020 (N=225)

Attitude before coming to OPD	Male	Female	Total	Chisquare, P-value
Think visiting OPD is safe amid of COVID 19				
Yes	67(45.58%)	80(54.42%)	147(65.3%)	0.01, 0.91
No	35(44.87%)	43(55.13%)	78(34.7%)	
Try to consult/take medication on your own from chemist shop before visiting OPD, in case of mild symptoms				
Yes	26(44.07%)	33(55.93%)	59(26.6%)	0.002, 0.96
No	72(44.4%)	90(55.56%)	162(73.4%)	
How important was it to visit OPD (opinion of treating doctor)				
Not at all required	31 (44.93)	38 (55.07)	69 (100)	
Could have done with home remedies	35 (44.87)	43 (55.13)	78 (100)	
Could have taken medicine from near by chemist shop	24 (45.28)	29 (54.72)	53 (100)	0.196, 1.00
Treatment could have differed till lockdown gets over	4 (44.44)	5 (55.56)	9 (100)	
Urgently required treatment	7 (46.67)	8 (53.33)	15 (100)	

It was observed that most patients who visited washed their hands (65.7%) and 87.56% were wearing masks and 71.56%maintained social distancing on their own however fewer did when were asked to follow and only 1% were reluctant in following these. Among these maximum people preferred wearing cloth masks (86.4%). Majority of the patients attending OPD (71.6%) responded that they washed their hands as frequently as 5-7 times a day and 14.6% were washing every 2-3 hrs as most were those who were going for work. Changing of mask was also reported as frequently as 4-6 hrs in about 48.9%. Mostly (68%) followed no household practices for general health improvement; however 15% participants told that they were consuming some kind of hot/warm water/Kadha/or homemade health drink to keep up the general health. (Table 3)

Table 3: Practice behavior among patients visited the OPD between the period of May 2020 to June 2020 (N=225)

	Male	Female	Total	Chi square, P value
Washing hands frequency				
5-7 times	76 (45.51)	91 (54.49)	167	
Every 2-3 hrs	18 (54.54)	15 (45.45)	33	2.00, 0.36
Only when required	21 (67.74)	10 (32.25)	31	
Wash/change mask				
After 4-6 hrs	67 (60.91)	43 (39.09)	110	
After every use	35 (52.23)	32 (47.76)	67	2.24, 0.52
After few days	28 (63.64)	16 (36.36)	44	
Never/>1 month use	3 (75.0)	1 (25.0)	4	

Table Cont....

	Male	Female	Total	Chi square, P value
After coming to OPD				
Washhis hand before entering				
On instruction	36 (49.32)	37 (50.68)	73	
On his own	67(45.27)	81 (54.73)	148	1.592, 0.45
Reluctant/not willing	3 (75.0)	1 (25.0)	4	
Maintained social distancing				
On instruction	34 (55.73)	27 (44.26)	61	
On his own	73 (45.34)	88 (54.66)	161	3.76, 0.15
Reluctant/not willing	0	2 (100)	2	
Wearing a mask				
On instruction	7 (43.75)	9 (56.25)	16	
On his own	89 (45.18)	108 (54.82)	197	1.634, 0.44
Reluctant/not willing	6 (66.67)	3 (33.33)	9	

On analysing the data of qualitative study (In-Depth interview of the health care provider) the following were the important dialogues as communicated by the public health experts:

"This pandemic will leave a deep impact on all and will affect us for a longer time than we think" (expert from Delhi and Gujarat commented)

"Need of preparedness of our health care facilities to work efficiently is much needed, particularly for the primary health care facilities on which most of our population dependent" (expert from all five zones commented)

"The need for the permanent change in the operations of OPDs at primary setup is required for safety of health care professionals and patients attending" (expert from Gujarat, Kolkata commented)

"Change in sitting, waiting area of the OPD, ensuring social distancing, hand hygiene and masks on all at all times is important" (all 5 experts emphasised this)

"Training of staff for triage, seting up OPD premises, use of PPE kits very important to safe guard them" (two experts raised the point)

"Use of barrier screens at different places to minimise infection at all times within the premises"

"regular cleaning by staff with sodium hypochlorite important" (added by all 5 experts)

"Limiting patient input, restricted entry of patient attendee can be implemented to ensure less crowd at a time,and limiting exposure to healthy individuals"

"Adequate stocks for efficient working, even medicines to allow us for extended refill or direct refill of patient from the window, in case of chronic diseases like hypertension, diabetes" (3 of the experts opined on it)

"patients entry and exit could be made at different points if the infrastructure provides"(expert from Gujarat and Himachal Pradesh was of this view)

"Reducing the viral load at any given point can be key, we can do that different methods like open OPDs, Proper ventilation, reducing patient incoming etc"(all 5 experts agreed on this)

"Use of extensive IEC material like posters, videos in the waiting area to promote hand hygiene, social distancing and proper methods of wearing mask, washing hands etc can be very useful"(suggested by 4 experts)

"We have to limit the no of examinations, like if patient needs referral can be directly referred, also in cases we feel examination might not bring as much good and risk is higher we can avoid detailed examination"(suggested by one of the expert).

"Field workers to be trained for IEC from door to door following all precautions"(mentioned by one expert)

DISCUSSION

In the context of the COVID-19 pandemic, the distinct capacity of primary health care facilities and community field activities are of utmost importance not only to provide trusted community members for social engagement and delivering care but also to reduce load of patients at our secondary and tertiary level

health care facilities and so their efficient and safe functioning in the post lockdown period of the pandemic are even more critical. It is important to set protocols/recommendations for health care facilities, to work efficiently and risk free in the post lockdown for both beneficiaries and service providers. Practical recommendations for decision makers to help keep primary health care facilities, communities and health workers safe, and to sustain essential services at the community level are needed specially in counties like India.

The mixed method of the study gave a fair idea of symptoms which brought the patients to the primary care OPDs at the time of lockdown, which can be further utilised to upgrade, maintain facilities at primary health care centres to reduce the load at tertiary care facilities post lockdown period. The current analysis shows that most of the people in the general public had awareness for the pandemic; were following the basic hygiene and cough etiquettes, however fewer were reluctant. Most of the people were able to understand the seriousness of the situation and follow the instructions of basic hygiene, social distancing and wearing masks while attending the health care facilities. It also seemed that people belonging to older (>60yrs) or younger than 20yrs differed coming in for the OPDs and those who attended were for chronic diseases refill or respiratory symptoms.

On studying symptoms, it can be commented that visiting of patients to the OPDs can be significantly reduced by giving extra refills of medicine for chronic diseases and same was supported by the Primary health care providers in their interview. Patients visited for mainly the painful chronic diseases. In a similar study by Garg *et al.*, from different outpatient clinics across India reported that clinic operations were reduced for the noncommunicable diseases and the immunization clinics while ANC services were less disrupted and the general OPDs were least disrupted.[6] The immunization and ANC services at our study setting were disrupted. The frontline community health workers, including the accredited social health activists, were engaged in the surveillance and contact tracing activities related to COVID-19.[7] Hence the community mobilization of women and caregivers for continuing with immunization and regular ANC services at the PHCs was also disrupted.[6]

The themes and subthemes which evolved from the recommendations of experts were tabulated in Table 4. The needs of a public health specialist/medical officer were presented as themes majorly categorised into three categories: infrastructural, administrative and innovative changes.

Table 4: Needs of health care providers at PHCs

Themes	Infrastructural changes	Administrative changes	Innovative changes	Behavioural Changes
Subthemes	OPD being carried out in well ventilated space	Changes in providing treatment and Examination	Implementing facilities for e-consultation can be explored, as computers are available in most of the PHCs and a common system can be stationed in the OPD premises for patients for doctor: patient interaction.	Following OPD rituals (washing hands before and after consultation, wearing masks, avoid touching objects unnecessarily, maintain social distancing)
	Plastic shield can be placed in the OPD, between the doctor and patient and keeping the safe distance.	Changes in Immunization / MCH care days at Primary Health centre	Upgrading the laboratories and basic facilities can be done at the primary health centre for reducing the load of patients at tertiary care center.	Showering rituals (changing clothes and taking shower after visiting any OPD/ Hospital)
	Examine with protection equipment N95 mask for health Care workers Head Shield and Gloves	Only one patient should be sent to the Doctor Consultation room at a time with only one attendant, if required	Aadhar based database for tracking chronic disease patients online for extended medicine refill (at least for 3 months) and prior appointments	Avoid taking children and elderly to OPDsif not required

Table Cont...

Themes	Infrastructural changes	Administrative changes	Innovative changes	Behavioural Changes
	Following disinfection at different levels.	Wearing a mask should be made mandatory at all times for all attending the OPD	–	–
	–	Screening and triage by interns/ other medical staff	–	–

Infrastructural changes

These were aimed to promote social distancing and reduce transmission of virus through fomites. Ventilation of OPD area, distance between doctor and patient, barrier shield between patient and doctor in OPD, examine using PPEs and use of face shields were the major sub themes which emerged out. Garg et al., in their analysis assessed the safety and infection control in PHCs and reported that nearly half of the sites were missing separate or multiple entries and exits and majority reported inadequate ventilation at their PHC sites.[6] There has been inadequate availability of PPE for health care providers during the COVID-19 pandemic worldwide.[8] The needs of these health care providers have to be presented to authorities which formulate guidelines for PPE use.

Administrative changes

Every respondent was of view of bringing administrative change in managing patients with the approval of higher authorities. These included limited entry of patients in doctor's room, making masks mandatory for patients and attendants, separate counter for refill of medicines if patient has no complains and increasing the number of days in a week for preventive services like MCH. One of the respondents suggested to take the help of Interns in screening all the patients first and separating them on the basis of their signs and symptoms to ensure that other patients in the OPD as well as the hospital staff are not infected due to transmission of infectious agents. Garg et al., reported that majority of their respondents (66.7%) supervising PHC sites lacked adequate confidence in achieving effective segregation of patients with presumptive COVID-19 from other routine beneficiaries for preventing nosocomial transmission of the SARS-CoV-2 infection at their sites.[6] The medical officer of PHC is the administrative head hence the decisions should not be difficult to be taken. However the social structure of the society is reflected upon the behavior of patients too. It is at times difficult for the medical officer to dictate changes at his center as it involves behavior change of patients. Periodic medical check-up of all the staff posted at Centre's.

Behavioral changes

Experts were in favor of making patients and attendants responsible for their behavior. There is a need of aligning the credible sources to communicate a unified message to avoid the disconnect between the guidelines and practice. Different channels of mass communications should be used to promote wearing of masks at the time of visit to OPD, washing their hands before and after consultation with the doctor, avoiding touching doorknobs, handles, tables unnecessarily in the hospital, changing clothes and taking shower after visiting any OPD/Hospital and also to debunk the myths prevalent in the society.

Innovative changes

Few of the needs were categorised into innovative suggestions which involved e-consultation at PHC level and upgrading the laboratories to decrease the burden of tertiary centres. Telemedicine has been functional at tertiary centres during the pandemic and the availability of cheap telecommunication services, the probable role of telemedicine services to maintain continuity of care should be considered.[9] All the patients coming to the primary health center can be enrolled by their Aadhar number. Investigation done through laboratories also can be tracked through Aadhar number. This not only will reduce the expenditure but also will make the health care delivery faster.[10]

CONCLUSION

Human being are the only creature who have shown great degree of adaptability over

the decades and this pandemic is the most recent example of proving importance of adaptation and constant change. This is the first pandemic where the adaptation has been done rapidly. The lockdown period has given us time to reformulate and revamp our health care system even for the patients who are not infected with COVID 19. Tele-consultation or e consultation, measures to ensure social distancing, glass barriers in OPD, re focusing on cough etiquettes and wearing masks during consultation are some of the measures which if adapted, can be of great benefit.

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