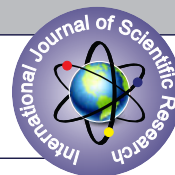


WHY 'NO' TO HEALTH FACILITY DURING THE COVID-19 PANDEMIC: AN EXPLANATORY MIXED METHOD STUDY TO EXPLORE THE REASONS OF LESS PATIENT FOOTFALLS AT THE HEALTH FACILITIES OF PURULIA DISTRICT, INDIA.



Healthcare

Arupkumar Chakrabartty*

Hony. Secretary, Health Vision and Research, Kolkata, India. *Corresponding Author

Abhijit Dey

Consultant, World Health Organization, Kolkata, India

Kazi Monjur Ali

Assistant Professor, Department of Nutrition, MUC Women's College, Burdwan, India

Buddhadev Mondal

Department of Zoology, Burdwan Raj College Burdwan, Purba Bardhaman

Surajit Das

Department of Zoology, Kabi Nazrul College, Birbhum, India

ABSTRACT

AIMS: During COVID-19 pandemic, health care resources are being diverted towards the acute crisis, de-emphasizing the routine medical care. It is not only less access of health care but people also avoiding health care facilities during this pandemic. Medical care delay or avoidance might increase morbidity and mortality of treatable and preventable health conditions. Literatures have reported the decline in patient footfall and the impact of it but there is limited information on the reasons why people saying 'No' to the health care facility. Hence, we aimed to conduct this mixed method study to explore the challenges faced by the community to access & utilize the health care services during this COVID-19 pandemic.

METHODS: A secondary data analysis was performed on the data obtained from hospital registers and Web Based Health Management Information System, Followed by Key informant interview on Health service providers and Focussed group discussion among the community dwellers.

RESULTS: OPD & IPD Footfall decreased significantly in the Health Facilities of Purulia District during covid pandemic in comparison to pre-pandemic time. Lowest footfall in Manbazar RH observed during the initial lock-down in 2020 & at the time of the second wave in 2021. Main reasons for decreased footfall are fear of getting covid, dissatisfaction with health care service during the pandemic, lack of transport availability, stigma attached with covid, less occurrence of disease due to IPC practices, preference of local informal providers & self-medication.

CONCLUSIONS: Maintaining essential health services and behaviour change communication and de-stigmatization program is a need of hour.

KEYWORDS

Covid, footfall, health, behaviour, avoidance

INTRODUCTION:

The novel coronavirus disease 2019 (COVID-19) pandemic is straining health systems worldwide. The rapidly increasing demand on health facilities and health care workers threatens to leave some health systems overstretched and unable to operate effectively[1]. As the global burden of Covid continues to increase, particularly in low and middle-income countries such as India, it imposes huge costs on individuals, communities, health systems, and economies[2,3]. Throughout the world, hospitals and health care professionals are being diverted towards the acute crisis of caring for patients with COVID-19, focusing on care for patients who are critically ill and has de-emphasized routine medical care, including wellness examinations, chronic disease management, elective surgical procedures, vaccinations, preventive health care, and screening for cancer, TB and other diseases[4]. We know from previous epidemics that reduced access to care, medicines and diagnostics for people can lead to an increase of deaths from the underlying conditions. For example- in Guinea, that was one of the countries at the epicentre of the 2014-2015 Ebola epidemic, reduced health services led to a 53 per cent decrease in the diagnosis of Tuberculosis (TB), and a doubling of the mortality rate from the disease, as a result from direct and indirect impacts on TB health services[5]. Now, it is being reported by many studies and news reports that there is significant decrease in patient footfall in the hospitals during this pandemic in comparison to pre-pandemic time[6-8]. One study reported that during the COVID-19 lockdowns in India, 83% of participants reported difficulty in accessing healthcare[3]. Anecdotal evidence suggested that there is significant less patient footfall even after withdrawal of the lockdown. This has a serious implication in terms of disease progression & transmission of communicable disease without timely treatment of existing diseases. It's not only less access of health care but people also avoiding health care facilities during this pandemic[9,10]. Medical care delay or avoidance might increase morbidity and mortality risk associated with treatable and preventable health conditions and might contribute to reported excess deaths directly or indirectly related to COVID-19[11]. Urgent corrective action should be planned by the authorities to prevent the upcoming tragedies due to less health care access & utilization.

Several literatures have reported the extent of decline in patient footfall as well as the different medical, socio-demographic & economic impact of it [3,6-8,12-16]. But there is limited information on the reasons why people avoiding health care facilities during this pandemic. What exactly preventing them to consult a doctor or visiting a health care facility? With extensive literature search we could not find any such studies in West Bengal. Hence, we aimed to conduct this study to explore the challenges faced by the community to access & to utilize the health care services during this COVID-19 pandemic. The

information and lessons learnt from this project is imperative to fix the health system restoration plan.

SUBJECTS AND METHODS:

Study Design and Population:

Study Design: We conducted an explanatory mixed methods study with a quantitative part and followed by a qualitative part.

For quantitative part, a secondary data analysis was performed on the data obtained from hospital Outpatient Department (OPD) register, Inpatient Department (IPD) register and Health Management Information System (HMIS) Portal[17]. All patients who have attended any hospitals of Purulia district during the period of April-19 to April-21, have been included in the analysis.

For qualitative part we conducted Key Informant Interview (KII) to the Health service providers including Superintendent of the Rural Hospital (RH), Medical officer (MO), nursing staff, Public Health Nurse (PHN), Accredited Social Health Activist (ASHA), staff of National Tuberculosis Elimination Program (NTEP), Private pharmacist & Local informal provider of a block namely Manbazar-I. Focussed Group discussions (FGDs) were also conducted among the village population. To ensure active, free & spontaneous participation group member purposively selected from same sex & age group. The final sample size was guided by the saturation of findings, and we have conducted total 11 KII & 4 FGD to reach the point of saturation.

Study Setting: Purulia is the westernmost district of West Bengal with all-India significance because of its tropical location, its shape as well as function like a funnel. It funnels not only the tropical monsoon current from the Bay to the subtropical parts of north-west India, but also acts as a gateway between the developed industrial belts of West Bengal and the hinterlands in Orissa, Jharkhand, Madhya Pradesh and Uttar Pradesh. The district is bordered on the east by Bankura, Paschim Medinipur districts, on the north by Bardhaman district of West Bengal state and Dhanbad district of Jharkhand state, on the west by Bokaro and Ranchi districts of Jharkhand state and on the south by West Singhbhum and East Singhbhum districts of Jharkhand state[18].

Manbazar I is a community development block (CD block) that forms an administrative division in the Manbazar subdivision of the Purulia district. Manbazar I CD block had 1 rural hospital and 2 primary health centres, with total 54 beds. Manbazar Rural Hospital (Manbazar RH), with 40 beds, is the major Government medical facility in the Manbazar I CD block[19].

Data Analysis:

Quantitative part:- Data source was OPD register, IPD register and HMIS standard report. Data on patient footfall was entered in Microsoft® Excel® (2016). The obtained data relevant to the study was analyzed after cleaning and validation. Microsoft® Excel was used for tabulation & analysis. Key analytic outputs were the number and proportion of decline in footfall. Time to date comparison was made between a pre-Covid month (April-19) and month in Covid period (April-20). Month-wise trend of patient footfall from April-19 to April-21 is depicted with a line chart. The analysis was done for Manbazar RH as well as for Purulia District Total.

Qualitative part:- Transcripts were prepared on the same day or one day after the interview using mobile phone audio-recording and field notes where recording was not possible. KIIs & FGDs were conducted face-to-face in local language (Bengali) by AKC (a male medical doctor, MBBS, MPH, PHD and trained in qualitative research) after obtaining consent. Manual descriptive thematic analysis of the transcripts was done by the authors (AKC) to identify the codes. The decision on the final coding and theme generation was done using standard procedures and was in consensus. The findings were reported using "Consolidated Criteria for Reporting Qualitative Research" [COREQ guideline][20]

ETHICAL APPROVAL: The study was approved by the Institutional Ethics Committee of the Deben Mahato Government Medical College, Purulia, West Bengal (C-4/PR/DMGMCH/EC/20/1124). Written informed consent for conducting the interviews and audio-recording the interviews was obtained from all the participants who were included in the qualitative study.

Table-1: Year to date comparison of patient footfall- Percentage decline in total OPD footfall during April-20 in comparison to April-19, at Manbazar RH as well as at Purulia District total. [Data source: HMIS]

OPD foot falls	Manbazar RH			Purulia Total		
Department	Apr-19	Apr-20	Decline (%)	Apr-19	Apr-20	Decline (%)
Allopathic-Outpatient attendance	17880	13917	22.2	36660	20947	42.9
Ayush - Outpatient attendance	593	56	90.6	14671	3876	73.6
Outpatient - Diabetes	NA	NA	NA	1613	795	50.7
Outpatient - Hypertension	65	68	-4.6	3495	2229	36.2
Outpatient - Stroke (Paralysis)	NA	NA	NA	9	1	88.9
Outpatient - Acute Heart Diseases	NA	NA	NA	25	11	56.0
Outpatient - Mental illness	NA	NA	NA	60	26	56.7
Outpatient - Epilepsy	NA	NA	NA	6	0	100.0
Outpatient - Ophthalmic related	74	42	43.2	3626	1431	60.5
Outpatient - Dental	566	58	89.8	2399	1446	39.7
Total (All OPD combined)	19178	14141	26%	392512	219287	44%

Abbreviations: OPD= Outpatient Department, HMIS= Health Management Information System, RH= Rural Hospital, AYUSH= Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy, NA= Not available (data)

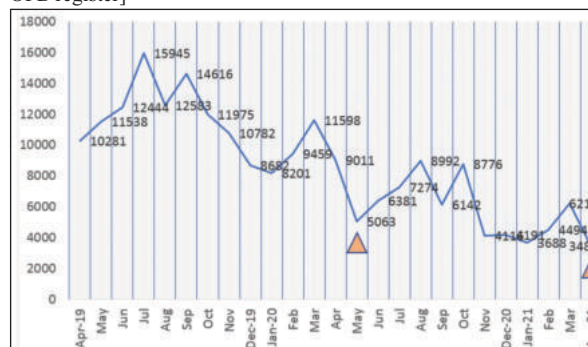
Table-2: Year to date comparison of patient footfall- Percentage decline in total IPD admission during April-20 in comparison to April-19, at Manbazar RH as well as at Purulia District total. Data source: HMIS

IPD Admissions	Manbazar RH			Purulia District Total		
Hospital wards	Apr-19	Apr-20	Decline (%)	Apr-19	Apr-20	Decline (%)
Inpatient (Male)-Children<18yrs	76	28	63.2	2860	1292	54.8
Inpatient (Male)- Adults	68	76	-11.8	7037	3410	51.5

Inpatient (Female)-Children<18yrs	165	32	80.6	3012	1422	52.8
Inpatient (Female)-Adults	322	177	45	10774	5836	45.8
Total IPD	631	313	50%	23683	11960	49%

Abbreviations: IPD= Inpatient Department, HMIS= Health Management Information System, RH= Rural Hospital, AYUSH= Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy, NA= Not available (data)

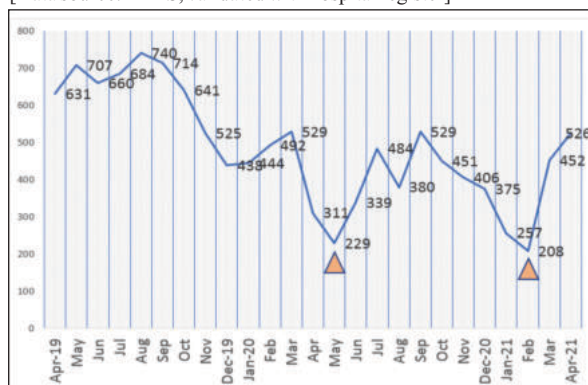
Figure-1: Month wise trend of OPD footfall at Manbazar RH, Purulia, from April-19-April-21 [Data source: HMIS, validated with hospital OPD register]



Abbreviations: OPD= Outpatient Department, HMIS= Health Management Information System, RH= Rural Hospital

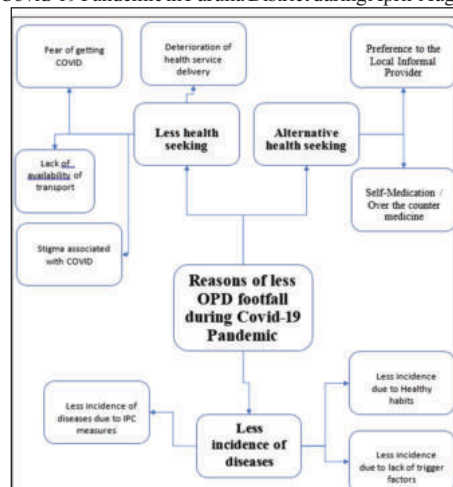
Figure-2: Monthly trend of IPD admission at Manbazar RH, Purulia, during April-19-April-21

[Data source: HMIS, validated with hospital register]



Abbreviations: IPD= Inpatient Department, HMIS= Health Management Information System, RH= Rural Hospital

Figure 3: Themes and codes related to the Reasons of less OPD footfall during Covid-19 Pandemic in Purulia District during April-August 2020.



Abbreviations: OPD= Outpatient Department , COVID= Corona virus disease 2019, IPC= Infection , Prevention & Control

RESULTS:

Quantitative results:

Month wise trend of patient footfall at Manbazar RH: **Figure-1** is showing the declining trend of total OPD footfall over the years 2019-2021. Lowest footfall during 2019 was in the month of December. Whereas during 2020 & 2021 (till April) lowest footfall was in the month of May-20 & April-21 respectively.

Figure-2 is showing the declining trend of total IPD attendance over the years 2019-2021. Lowest admission during 2019 was in the month of December. Whereas during 2020 & 2021 (till April) lowest admission was in the month of May-20 & February-21.

Year to date comparison of patient footfall: **Table-1** is showing the percentage decline in total OPD footfall during April-20 in comparison to April-19, both at Manbazar RH (26%) as well as at Purulia District (44%),

Table-2 is showing the percentage decline in total IPD admission during April-20 in comparison to April-19, both at Manbazar RH (53%) as well as at Purulia District (49%),

Qualitative results:

From the quotes & verbatims we deduced 9 codes, which were clubbed into 3 broad categories. The categories are described below under the theme- "Reasons of less OPD footfall during Covid-19 Pandemic". (**Figure-3**)

- A. Less health seeking:** Less health seeking during the Pandemic was found to be one of the major reasons for less patient footfall during COVID-19. The codes that were related to this category were.
 - a) Fear of getting COVID:** Fear of contracting the COVID-19 from the hospital or Clinic was one of the primary reasons for avoiding hospital unless there is any emergency as they are afraid that there is not adequate infection prevention control system in the hospitals.

"We may catch the Covid-19 infection if we visit Hospitals , since a lot of infected patients seek care at Hospitals."—14 Years Female

"I don't think unless there is an emergency we should go to Hospital as there is risk of getting COVID from Hospital"- 31 Years Female

"Doctors, nurses and other paramedics use good masks and PPE to avoid contracting Corona, but no such facility is extended to those of us standing in the queue at the OPDs."— 19 Years Female

A Doctor also endorsed the fact that people are avoiding hospital due to fear of getting COVID. He was afraid that people might be hiding their illness which might be dangerous.

"People are not coming for mild symptom and for chronic illness. They may have suppressing their illness only to be present later with more advance stage"—Male Medical Officer (Manbazar RH)

- b) Deterioration of health service delivery:** Deterioration of health service was found to be another most common reason why people say no to health care facility. Due fear of getting nosocomial infection health staff could not take the usual care. Many of the participant reported negligent attitude of the health care staff during the pandemic. Some of them also reported unavailability of essential medicine at the Hospital.

"12-year-old grandson had convulsions, but the attending Doctor did not even bother to touch him. Nurse gave some injections, but my grandson died at the hospital itself due to delay for care."— 68 Years Female

The Health Facility staff like Doctors, nurses and other paramedics themselves are scared. Doctors, unlike pre-pandemic days, are avoiding touching patients during examination. They make the patient stand/sit at a distance and just listen to the complaint. There are no physical exams carried out."- 56 Years Male

"My wife had been admitted for diarrhoea, but no medications given from the Hospital, except a normal saline drip. I had to purchase all medicines from outside. They told due to Corona; no medicine was

available. All have gone to Corona hospital."— 30 years Male

One hospital staff working in Tuberculosis (TB) program also sounded in a similar tone

"Less presumptive TB case referral & less General OPD footfall simply because of less availability of resources. Many staff have been taken for COVID duty. Many are affected with COVID. Hospitals are running with less than half of its actual strength." — 36-year Male (Staff under National TB Elimination Program)

- c) Lack of transport availability:** Some of the hospital staff reported that during lockdown there was lack of affordable transport facility so people might prefer not to come to hospital.

"Due to lack of proper public transport especially the local train, people are not coming to the hospital. They are trying to manage common minor illness at home."— Nursing Staff (29 years Female)

- d) Stigma associated with COVID:** Stigma attached with the covid infection also seems to play a major role in hospital avoidance behaviour. They believe going hospital or doing covid test will raise suspicion among the neighbours that they family have COVID & neighbour will start avoiding or boycotting the family.

"For any type of cough, cold, fever; the Doctors advise patients to go for a 'Corona test'. ..But everybody does not have it – why should we go for unnecessary Corona test?. Neighbour will think that we might have Corona even if the test result is negative!"—43 years Male

"People are taking avoiding going hospital as they are scared that if their Covid positive status is disclosed, they may be shunned by their neighbours or ostracized."— ASHA worker (33 Years Female)

- B. Alternative health seeking:** Instead of visiting bigger hospitals or Popular clinic people used to visit local traditional practitioner during the pandemic. People also preferred self-prescribed over the counter medicine.

a) Preference for informal provider:

"Patients coming are mostly cases with respiratory problems, joint pain, fever, dental, eye problems etc. Though cases like abdominal pain, diarrhoea have come down but overall number of patients in my clinic have increased"— Local Informal providers (40 years Male)

b) Preference for Over-the-counter Medicine:

"Overall medicine sale has been reduced. People are mainly taking loose medicine without prescription"— Local Chemist (55 years Male)

- C. Less incidence of Disease:** Participants also stated that they feel that there is less incidence of Diseases may be attributable to practice of Infection Prevention Control (IPC), & other Health habits. They also stated that there is less cases of cardiac disease , road traffic accident, physical assault & other injuries due to less outdoor activities & less human interaction.

a) Less incidence of diseases due to IPC:

"Widespread use of masks, lockdowns, distancing, restrictions around mobility as well as social gatherings, better hand hygiene etc. might have contributed to reduce the spread of other infectious diseases"— Male Medical Officer (Manbazar RH)

b) Less incidence due to Healthy habits:

"People are now at home. They are taking home made food. It is hot and safe. So no disease"— 60 years Female

"When men are going outside, they are taking home made food with them. Outside hotels are all closed. So less chance of stomach problem"— 50 years Male

"Shops like oil cake, street food are all closed. Our children are not eating these things. Only food available is local vegetables, dal and rice. They do not have disease now. No need to go to hospital."—30 years Female

c) Less incidence due to lack of exposure or trigger factors:

"Not only infectious disease but also non-communicable diseases like heart disease or Kidney disease. Road traffic accident, Physical assault & other cases of injuries also gone down as there is less traffic , less outdoor activity & less man to man interaction."— Male Medical Officer (Manbazar RH)

DISCUSSION:

This is one of the first study which described the challenges faced by the community dwellers towards formal health seeking. Below are the explanations of the key findings in light of relevant literatures-

First, Total OPD & IPD footfall is lower in 2020 than 2019. First 4 month of 2021 indicating even lower footfall during 2021.

Month of lowest OPD footfall of 2020 was May whereas in 2021 it was April. This may be explained by the lockdown & highest level of panic during April 2020 and highest covid case load & death in the month of April 2021 (within first 4 months). The decrease in OPD footfall, in comparison to April-19, was 26% at Manbazar RH & 44% at Purulia District. Studies elsewhere reported higher rate (60-62%) of decline in OPD footfall [8,21].

The decrease in IPD admission, in comparison to April-19, was 53% at Manbazar RH & 47% at Purulia District. So, the analysis revealed that IPD admission was affected more than the OPD footfall in Purulia District. Some of the studies reported higher rates (58-69%) of decline [21,22]. Whereas some other reported 30-32% decline in hospital admission [23,24].

Second, Less health seeking or hospital avoiding behaviour of people came out as the most important reasons behind the decline in patient footfall. Lack of resource needed to sustain optimum health care services, fear of contracting Covid-19 infection during hospital visit, lack of availability of public transport especially the local trains and the stigma associated with covid were the underlying reasons of the hospital avoidance. A recent study estimated 40.9% of U.S. adults have avoided medical care during the pandemic because of concerns about COVID-19 [25].

Third, during this pandemic people preferred local unqualified practitioner over the busy hospital of Popular allopathy clinics for mild to moderate illness. The self-prescribed over-the-counter medicine cell was increased during the lockdown period. Studies elsewhere also reported that during public health emergencies, there is heavy reliance on informal healthcare providers [26,27]. literatures also reported the issue of increased self-medication during the covid pandemic [28,29].

Fourth, the study generated a hypothesis that the COVID pandemic has actually minimized the incidence of other diseases! Widespread use of mask, sanitizer & social distancing can actually minimize the transmission of common infectious disease like diarrhoea, measles, common cold, pneumonia & Tuberculosis & other respiratory diseases. There are similar reporting from other literature [10,30].

Studies showed health benefit especially prevention of influenza like outbreak can be effectively done if population use mask (simple cloth mask or surgical mask) whenever they have any grade of respiratory symptoms [31,32]

Decrease in incidence of trauma, accident, injury can be explained by less outdoor activity, less interpersonal communication during the pandemic especially during the lockdown period.

Though we could not identify any reasonable factor responsible for reduction of the incidence of non-communicable disease but the study also generated evidence of less incidence of non-communicable diseases including heart disease. A very recent study reported significant reductions in hospital admission, during 2020 in comparison to 2019, for acute myocardial infarction (33.9%), cerebrovascular disease (41.5%), and cancer (31.9%) [33]. The actual cause may be people are suppressing their illness only to present later with more advance stages of the disease. Further research is needed to explore the actual status of Non communicable disease incidence during COVID Pandemic.

Limitation of the study: Despite the best efforts, the study had a few limitations. First, in the quantitative analysis, the socio-demographic factors like, age, sex, education, occupation, income, distance from health facility, marital status, status of comorbidity and addiction were not included. Thus, the factors associated with not visiting health care facility could not be established. Second, the data were taken from HMIS databases and were not collected prospectively for this research. Third, this is a single-center study; therefore, the results may have been influenced by local characteristics like disease incidence, economic status, socio-cultural practice, citizen behaviors and attitudes toward the epidemic. Fourth, the interview responses are subject to recall, response, and social desirability biases. Fifth, the study did not assess baseline patterns of care-seeking or duration of care avoidance of the

study population.

Recommendations based on the findings: Based on the study's findings, there are few important recommendations for health care service delivery especially for the preventive health services.

1. Maintaining essential health services: No doubt COVID is largest health crisis of the century. The pandemic may continue to propagate for many more months to years. Government should take utmost care to control it but not at the cost of Essential health services. This is the time to generate new resource rather than shifting of resources from other health program as it may create a situation of other epidemic (such as vaccine preventable diseases, TB and even mental illness & other NCD). This is the time to invest more on health, increase national health budget. The study as well as the World Health Organization (WHO) is strongly recommending so [1].
2. Capacity building of informal provider: During public health emergencies, there is heavy reliance on informal healthcare providers. They should be thoroughly trained to manage common illness. In long run this will not only reduce out of pocket expenses of people but will also help improving hospital care by reducing over crowding at the hospitals as seen in the public hospitals of low- & middle-income countries.
3. Regulation on selling of over-the-counter medicine: Buying over the counter medicine with inappropriate self-prescription can lead to serious outcomes like incorrect diagnosis, serious adverse effects, drug interactions, drug dependence, and microbial resistance. Thus, there is a dire need to control and manage the over-the-counter drug sale practices by applying strong legislation and involving drug controller, healthcare professionals and policy makers.
4. Restoration of Health seeking behaviour:- Community awareness program should be arranged to disseminate scientific knowledge about COVID. De-stigmatization program also a need of hour. Health seeking behaviour of the community must be regained at the earliest to prevent morbidity & mortality due to Non-Covid illnesses. Anticipating more COVID waves and thereby imposed travel restriction & strict social distancing norm, in future, the study recommends establishment of tele-consultation clinic in every public health care centre. The tele-consultation clinic should run in all weekdays throughout the OPD hours (9 am- 4pm or similar) and preferably can be connected through a toll free number.

CONCLUSIONS:

OPD & IPD Footfall decrease significantly in the Health Facilities of Purulia District during covid pandemic in comparison to pre-pandemic time. Lowest footfall in Manbazar RH observed during the initial lock down in 2020 & at the time of the peak of the second wave in 2021. Main reasons for decrease footfall are fear of getting covid, dissatisfaction with health care service during the pandemic, lack of transport availability, stigma attached with covid, less occurrence of disease due to IPC practices, preference of local informal providers & self-medication. Re-establishment of essential health services & restoration of community health seeking behaviour is a need of hour.

REFERENCES:

- [1] World Health Organization (WHO). WHO releases guidelines to help countries maintain essential health services during the COVID-19 pandemic. Publications/ Overview 2020. <https://www.who.int/news/item/30-03-2020-who-releases-guidelines-to-help-countries-maintain-essential-health-services-during-the-covid-19-pandemic> (accessed June 27, 2021).
- [2] World Health Organization (WHO). Weekly epidemiological update on COVID-19- 22 June 2021. Sitrep 2021. <https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---22-june-2021> (accessed June 27, 2021).
- [3] Singh K, Kondal D, Mohan S, Jaganathan S, Deepa M, Venkateshmurthy NS, et al. Health, psychosocial, and economic impacts of the COVID-19 pandemic on people with chronic conditions in India: a mixed methods study. BMC Public Health 2021;21:1-15. <https://doi.org/10.1186/s12889-021-10708-w>.
- [4] Roth AR, Lazris A. Benefits of Avoiding Unnecessary Medical Care During the COVID-19 Pandemic. Am Fam Physician 2021;103:584-5.
- [5] Médecins Sans Frontières. COVID-19 coronavirus: How to avoid a second tragedy for those with tuberculosis | MSF 2020. <https://www.msf.org/covid-19-how-avoid-second-tragedy-those-tuberculosis> (accessed March 26, 2020).
- [6] Times of India. Patient footfall decreases by 80% at district hospital Noida. Newspaper 2020. <https://timesofindia.indiatimes.com/city/noida/patient-footfall-decreases-by-80-at-district-hospital/articleshow/77187718.cms> (accessed June 27, 2021).
- [7] Times of India. Outpatient footfall dips by 15%-30% across city, Kolkata. Newspaper 2020. <https://timesofindia.indiatimes.com/city/kolkata/outpatient-footfall-dips-by-15-30-across-city/articleshow/82185898.cms> (accessed June 27, 2021).
- [8] Commonwealth Fund. The Impact of the COVID-19 Pandemic on Outpatient Visits: A Rebound Emerges. Publications 2020. <https://www.commonwealthfund.org/publications/2020/apr/impact-covid-19-outpatient-visits> (accessed June 27, 2021).
- [9] Czeisler ME, Marynak K, Clarke KEN, Salah Z, Shykya I, Thierry JM, et al. Delay or Avoidance of Medical Care Because of COVID-19-Related Concerns — United States, June 2020. MMWR Morb Mortal Wkly Report, CDC 2020. <https://doi.org/10.1101/2020.04.22.20076141v1>.
- [10] Kadambari S, Abo YN, Phuon LK, Osowicki J, Bryant PA. Decrease in infection-

- related hospital admissions during COVID-19: Why are parents avoiding the doctor? *Pediatr Infect Dis J* 2020;E385–6. <https://doi.org/10.1097/INF.0000000000002870>.
- [11] Centers for Disease Control and Prevention (CDC). Excess Deaths Associated with COVID-19. COVID-19 Data from NCHS 2021. https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm (accessed June 28, 2021).
- [12] Dey A, Lahiri A, Jha SS, Chakrabarty AK. Impact of COVID-19 Pandemic on the Tuberculosis Case Findings of India: Exploration of the Magnitude of the Threats as Well as the Available Opportunity to Mitigate the Threats. *EC Pulmonol Respir Med* 2020; 9:89–93.
- [13] World Health Organization (WHO). The impact of the COVID-19 pandemic on noncommunicable disease resources and services: results of a rapid assessment. *Publ Overv* 2020. <https://www.who.int/publications/i/item/9789240010291> (accessed June 28, 2021).
- [14] Ahuja G, Verma M, Patkar D. Financial impact of COVID-19 on radiology practice in India. *Indian J Radiol Imaging* 2021;31:S31–7. <https://doi.org/10.4103/ijri.IJRI30520>.
- [15] Growth T, Bajpai N, Wadhwa M. COVID-19 in Rural India. CSD Work Pap Ser Towar a New Indian Model Inf Commun Technol Growth Dev 2020. <https://www.newsclick.in/COVID-19-Pandemic-Rural-India-Impact-Kerala-Govt-Relief-Malappuram-Migrant-Workers>.
- [16] Cox C, Amin K, Kamal R. How have health spending and utilization changed during the coronavirus pandemic? Peterson-KFF Heal Syst Tracker 2021. <https://www.healthsystemtracker.org/chart-collection/how-have-healthcare-utilization-and-spending-changed-so-far-during-the-coronavirus-pandemic/#item-start> (accessed June 28, 2021).
- [17] Ministry of Health and Family Welfare: Government of India. HMIS-Health Management Information System 2019. <https://hmis.nhp.gov.in/#/standardReports> (accessed June 22, 2021).
- [18] Department of Municipal Affair: Government of West Bengal. Official Website of Purulia Municipality. BASIC Inf 2021. <http://puruliamunicipality.org/Default.aspx?PageId=118> (accessed June 24, 2021).
- [19] Ministry of Health and Family Welfare: Government of West Bengal. DIRECTORY OF MEDICAL INSTITUTIONS WEST BENGAL. Heal Stat 2018. https://www.wbhealth.gov.in/other_files/Directory_Medical_Inst.pdf (accessed June 24, 2021).
- [20] Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Heal Care* 2007;19:349–57. <https://doi.org/10.1093/intqhc/mzm042>.
- [21] Akhtar N, Rajan S, Chakrabarti D, Kumar V, Gupta S, Misra S, et al. Continuing cancer surgery through the first six months of the COVID-19 pandemic at an academic university hospital in India: A lower-middle-income country experience. *J Surg Oncol* 2021; 123:1177–87. <https://doi.org/10.1002/jso.26419>.
- [22] Heist T, Schwartz K, Butler S. Trends in Overall and Non-COVID-19 Hospital Admissions. *Epic Heal Res Netw* 2020;1–10. <https://www.kff.org/health-costs/issue-brief/trends-in-overall-and-non-covid-19-hospital-admissions/> (accessed June 28, 2021).
- [23] Bodilsen J, Nielsen PB, Søgaard M, Dalager-Pedersen M, Speiser LOZ, Yndigegn T, et al. Hospital admission and mortality rates for non-covid diseases in Denmark during covid-19 pandemic: nationwide population based cohort study. *BMJ* 2021;373:n1135. <https://doi.org/10.1136/bmj.n1135>.
- [24] Nourazari S, Davis SR, Granovsky R, Austin R, Straff DJ, Joseph JW, et al. Decreased hospital admissions through emergency departments during the COVID-19 pandemic. *Am J Emerg Med* 2021;42:203–10. <https://doi.org/10.1016/j.ajem.2020.11.029>.
- [25] Czeisler ME, Marynak K, Clarke KEN, Salah Z, Shakya I, Thierry JM, et al. Delay or Avoidance of Medical Care Because of COVID-19–Related Concerns—United States, June 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:1250–7. <https://doi.org/10.15585/mmwr.mm6936a4>.
- [26] Budnick A, Hering C, Eggert S, Teubner C, Suhr R, Kuhlmeier A, et al. Informal caregivers during the COVID-19 pandemic perceive additional burden: findings from an ad-hoc survey in Germany. *BMC Health Serv Res* 2021;21. <https://doi.org/10.1186/s12913-021-06359-7>.
- [27] Chan EYY, Lo ESK, Huang Z, Kim JH, Hung H, Hung KKC, et al. Characteristics and well-being of urban informal home care providers during COVID-19 pandemic: A population-based study. *BMJ Open* 2020;10. <https://doi.org/10.1136/bmjopen-2020-041191>.
- [28] Quispe-Cañari JF, Fidel-Rosales E, Manrique D, Mascaró-Zan J, Huamán-Castillón KM, Chamorro-Espinoza SE, et al. Self-medication practices during the COVID-19 pandemic among the adult population in Peru: A cross-sectional survey. *Saudi Pharm J* 2021;29:1–11. <https://doi.org/10.1016/j.jsps.2020.12.001>.
- [29] Malik M, Tahir MJ, Jabbar R, Ahmed A, Hussain R. Self-medication during Covid-19 pandemic: challenges and opportunities. *Drugs Ther Perspect* 2020;36:565–7. <https://doi.org/10.1007/s40267-020-00785-z>.
- [30] Deccan Herald. Masks for Covid-19 may end up eliminating tuberculosis by 2025. DH Web Desk 2020.
- [31] Sim SW, Tan □ ; Kirm Seng Peter Moey □ ; Ngiap Chuan. The use of facemasks to prevent respiratory infection: a literature review in the context of the Health Belief Model 2014. <https://doi.org/10.11622/smedj.2014037>.
- [32] Wada K, Oka-Ezoe K, Smith DR. Wearing face masks in public during the influenza season may reflect other positive hygiene practices in Japan. 2012. <https://doi.org/10.1186/1471-2458-12-1065>.
- [33] Caminiti C, Maglietta G, Meschi T, Ticinesi A, Silva M, Sverzellati N. Effects of the COVID-19 Epidemic on Hospital Admissions for Non-Communicable Diseases in a Large Italian University-Hospital: A Descriptive Case-Series Study. *J Clin Med* 2021;10:880. <https://doi.org/10.3390/jcm10040880>.