Original Article

OUTPATIENT SERVICE PROVISION IN TERTIARY HOSPITAL DURING COVID-19 PANDEMIC

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ABSTRACT

***Background*:** The COVID-19 pandemic was a challenge for healthcare professionals globally. The outpatient department is an important part of the hospital. Service providers were facing tremendous difficulties and challenges due to sudden thrust of the pandemic. Despite these challenges service providers had to give service during COVID-19 pandemic. The purpose of this study to assess the state of outpatient service in tertiary hospital during COVID-19 pandemic.

Methods: This cross-sectional study was conducted among conveniently selected 203 service providers including 156 doctors and 47 nurses. Data were collected through face-to-face interview using semi-structured questionnaire and observation checklist. The study was conducted at medicine, surgery, paediatric and family planning outpatient department of Shaheed Suhrawardy Medical College Hospital, Dhaka Medical College Hospital, and Bangabandhu Sheikh Mujib Medical University during the period from January to December 2021.

Results: Among 203 service providers, 76.8% were doctors and 23.2% were nurses. All health services were available during COVID-19 pandemic in outpatient departments (OPDs) of the selected hospitals. At outpatient department there was separate entry-exit door, thermal scan was available at entry point, Patients and visitors are restricted. Number of patients were decrease in outpatient department. Among the three hospitals facility of flu-corner and triage in the OPD of ShSMCH. For the DMCH and BSMMU, flu-corner and triage center were situated at other premises of the hospitals. Outdoor surgery, vaccination service and shishu bikash kendro were open during COVID-19 pandemic. About 80.8% respondents mentioned about availability of adequate amount of personal protective equipment, 42.9% respondents mentioned about proper ventilation, 57.1% respondents said had not. About 32.5% respondent said about availability of N-95 mask and 57.6% said had not. Among the respondents 67.0% said they maintained physical distance during consult with the patients. 57.6% respondents said about lack of manpower. 61.6% respondents said about felt anxiety and high-risk during service.

***Conclusion*:** For more improvement of outpatient service during COVID-19 pandemic, the authority should pay special attention, to increase manpower, arrange frequent training for service providers.

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Key Words: Outpatient department, Service provision, Tertiary hospital, COVID-19 pandemic

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INTRODUCTION

The COVID-19 pandemic is a global health emergency and the greatest threat for humankind. The corona virus disease first detected at Wuhan, China in December 2019 and it was named by the World Health Organization (WHO) as COVID-19.[1] Bangladesh officially declared its first identified COVID-19 case on 8th March 2020.Social distancing is the most effective way to contain the outspread of this virus, but this is not easy for healthcare professionals who require direct contact with COVID-19 patients and also non COVID-19 patients to puts themselves being infected. Frontline healthcare professionals are particularly vulnerable during this pandemic because healthcare

professionals had to work many hours to treat the patients.[2,3] During this Pandemic, it is very difficult for the health systems of lower and lower-middle income countries to coping with COVID-19 pandemic due to limited public health infrastructure and essential medical resources for the provision of dedicated care and management to presumptive COVID-19 cases and other non-COVID cases. Several tertiary care hospitals that which deals with outpatients have been converted into temporary dedicated COVID-19 hospitals to provide care to the patients with moderate and severe COVID-19 symptoms.[4] Consequently, the health care needs of patients with chronic diseases and maternal and child health requires alternative healthcare service, minor surgery. To face these challenges effectively, hospital planned an urgent response strategy, including preparation and re-allocation of human and medical resources, immediate fever screening, strict patient-visiting flow management, and reasonable information communication. Visiting-flow management and pre-examination triage were established on the whole hospital campus. Each medical building, including the outpatient building, was under closed management, with single-entry and single-exit. Medical staff and patients with their relatives were asked to use different entries and exits for getting in and out of the buildings. Volunteers were recruited at the entrance for screening, and those with abnormal temperatures or respiratory symptoms were not allowed to enter the buildings and were directed to the fever clinic. Hence, the preparedness of outpatient department was provided safe patient-centered care for meeting the current health needs of the population and preventing further transmission of the infection.[5] Outpatient department is an important part of hospital. Patients visit an outdoor service for various purpose take consultation, day care treatment, promotive and preventive services like health checkup, immunization, and family planning service and so on.[6] There are so many diseases which need face to face consultation and physical examination. Due to COVID -19 situation it is very difficult to serve outpatient. To assess the state of outpatient service provision in a tertiary hospital during COVID-19 pandemic was the purpose of the study. The outcome of the study may help the policy makers in future planning to overcome this type of public health emergency.

METHODS

It was a cross-sectional study conducted in outpatient department of Medicine, Surgery, Pediatric and Family planning department at Shaheed Suhrawardy Medical College Hospital (ShSMCH), Dhaka Medical College Hospital (DMCH) and Bangabandhu Sheikh Mujib Medical University (BSMMU) during the Period of 1st January 2021 to 31st December 2021. The study Population were doctors and nurses of outpatient department of all three hospitals. Inclusion criteria was doctors and nurses in both sexes who were involved the management of outpatient Services during COVID-19 pandemic and healthcare workers who gave informed written consent to participate in the study. Exclusion criteria was healthcare workers who did not want to participate and healthcare workers who were working as supporting staffs. Total 203 sample were taken conveniently. Data were collected through a semi-structured questionnaire and observational checklist. Questionnaire and observational checklist was prepared with these specific objectives- To assess the provision of outpatient services during COVID-19 pandemic, To determine the personal safety measures of service provider during management of outpatient department, To determine the way of services were provided during COVID-19 pandemic, To identify the barriers faced by the health care providers during outpatient service, To find out the socio-demographic characteristics of healthcare providers worked in outpatient department during COVID-19 pandemic. Maintaining all the formalities face to face interview was taken using the predesigned semi-structured questionnaire and observational checklist. Before preceding the data collection, the detail of the study explained to each respondent and informed written consent was taken. The data entry was started immediately after the completion of data collection. Collected data were checked, verified, coding, post coding and then entered in the computer. Only fully completed questionnaire entered for final analysis. The analysis was carried out by using both descriptive and inferential statistics with the help of Microsoft Excel and Statistical Package for Social Science (SPSS). Analysis was done according to the objectives. Data Presentation after completion of data analysis first draft was reviewed to followed, second draft for any editing, modification and final draft was prepared for submission to the authority. Data were presented in form of tables, graphs and charts etc. as per requirements. Informed consent of participants was taken both verbal and written, before collection. Their privacy regarding information was maintained strictly. Ethical clearance was taken

from Institutional Review Board (IRB) of National Institution of Preventive and Social Medicine (NIPSOM).

RESULTS

Services were available at all three hospitals during COVID-19 pandemic. Facility of separate entry exit door and thermal scan for patients and attendants were available. Number of patients decreased at OPD during COVID-19 pandemic in all three hospitals. In Shaheed Suhrawardy Medical College Hospital had Triage and flu corner at OPD, duration of flu corner was 19 months, patients' number were 100-150 per day, availability of necessary instruments was present in flu corner**.** Facility for screening, separate waiting area, availability of necessary instruments was present in triage**.** Dhaka Medical College Hospital & Bangabandhu Sheikh Mujib Medical University had no flu corner in OPD but they had separate area for Triage and flu corner for the patients in the hospital compound. OPD operation service was available, before operation, COVID-19 report had to submitted by the patients in all three hospitals. Vaccination and shishu bikash kendra service were available in all three hospitals. In ShSMCH vaccination service was 3 days/week and other two hospitals it was 6 days/week. Family planning service was available 6 days/week in all three hospitals (Table 1).

Table 1: Information related to outpatient service provision during COVID-19 Pandemic:

Services and facilities available during COVID-19 pandemic in outpatient department	ShSMCH	DMCH	BSMMU
Outdoor opened	Yes	Yes	Yes
Service change	No	No	No
Additional service provided	Yes	Yes	Yes
Separate entry-exit door for patients and attendants	Yes	Yes	Yes
Facility of thermal scan for patient & attendants at entrance	Yes	Yes	Yes
Number of patients	Decrease	Decrease	Decrease
Number of service providers	Increase	No change	No change
Triage • Triage facility in outpatient department • Facility for screening in triage • Separate waiting area for normal and respiratory patients	Yes	No (other premises of hospital)	No (other premises of hospital)
Flu-corner • Availability of Flu corner service • Duration of flu corner • Number of patients attended per day	Yes 19 months 50-60	No	No
Provision of service at surgery outdoor • Availability of operation service • COVID-19 report submitted before operation • Number of operation done/day • Operation theater disinfected every day	Yes Yes 10-15 Yes	Yes Yes 13-15 Yes	Yes Yes 10-15 Yes
Provision of service at paediatric outdoor • Availability of immunization service • Availability of shishu bikash Kendra service	Yes Yes	Yes Yes	Yes Yes
Provision of service in Family planning outdoor • Availability of family planning service	Yes	Yes	Yes

The study found that 72.4% said they had availability of hand sanitizer, 42.9% responded mentioned they had availability of proper ventilation and 57.1% said they did not have. shows, 80.8% respondent mentioned they had availability of personal protective measure, 32.5% had availability of enough N-95 Mask and 67.5% had not. 62.1% respondents said about proper donning doffing facility. Maximum participants that are 99 % were vaccinated against COVID-19. 61.6% respondent affected by COVID-19 infection (**Table 2).**

Table 2: Distribution of respondents according to personal safety measures during service provision at the outpatient department (n=203)

Personal safety measures	Response	f (%)
Availability of PPE	Yes	164 (80.8%)
	No	39 (19.2%)
Availability of N-95 mask	Yes	66 (32.5%)
	No	137 (67.5%)
Availability of hand sanitizer	Yes	147 (72.4%)
	No	56 (27.6%)
Availability of proper ventilation	Yes	87 (42.9%)
	No	116 (57.1%)
Availability of donning doffing facility	Yes	126 (62.1%)
	No	77 (37.9%)
Vaccination against COVID-19	Yes	201 (99%)
	No	02 (1.0%)
Affected by COVID-19 during service	Yes	125(61.6%)
	No	78(38.4%)

Table 3 shows, Among the respondent 55.2% used plastic/glass barrier. 67% said they maintained physical distance during consultation with the patient, All the respondent took precaution during physical examination of the patients. 100% respondents used mask, 61.1% used gloves, 23.6% used gown and 11.8% used face-shield.

Table 3: Distribution of respondents according to way of giving service (n=203)

	Response	F (%)
Use of plastic/glass barrier	Yes	112 (55.2%)
	No	91 (44.8%)
Maintained physical distance	Yes	1 36 (67.0%)
	No	67 (33.0%)
Type of precaution they took during physical examination		
Mask		203 (100%)
Gloves		124 61.1%)
Gown		48 (23.6%)
Face-shield		24 (11.8%)
Goggles		13 (6.4%)
Head cap		14 (6.9%)

Among the respondents 42.4% said they received training and 57.6% did not. 43.8% mentioned they had enough manpower and 56.2% mentioned they did not have enough power. 53.2% motioned they

had skilled manpower. Among all participants 60.1% had anxiety,61.6% felt high risk and 29.6% respondent felt burn-out during service in COVID-19 Pandemic. (Table 4).

Table 4: Distribution of respondents according to barriers faced by healthcare providers during outpatient service (n=203)

	Response	F (%)
Training received during COVID-19 Pandemic regarding OPD service	Yes	86 (42.4%)
	No	117 (57.6%)
Availability of enough manpower	Yes	89 (43.8%)
	No	114(56.2%)
Availability of skilled manpower	Yes	108 (53.2%)
	No	95 (46.8%)
Feeling anxiety during OPD duty	Yes	122 (60.1%)
	No	81(39.9%)
Feeling high risk during duty	Yes	125 (61.1%)
	No	78 (38.4%)
Feeling burn-out during duty	Yes	60 (29.6%)
	No	143 (70.4%)

Distribution of participants according to comments of better service 30.5% respondent mentioned about increase manpower, 20.2% mentioned about modern technology and equipment and 15.8% mentioned about proper management for betterment of the service. (Figure 1)

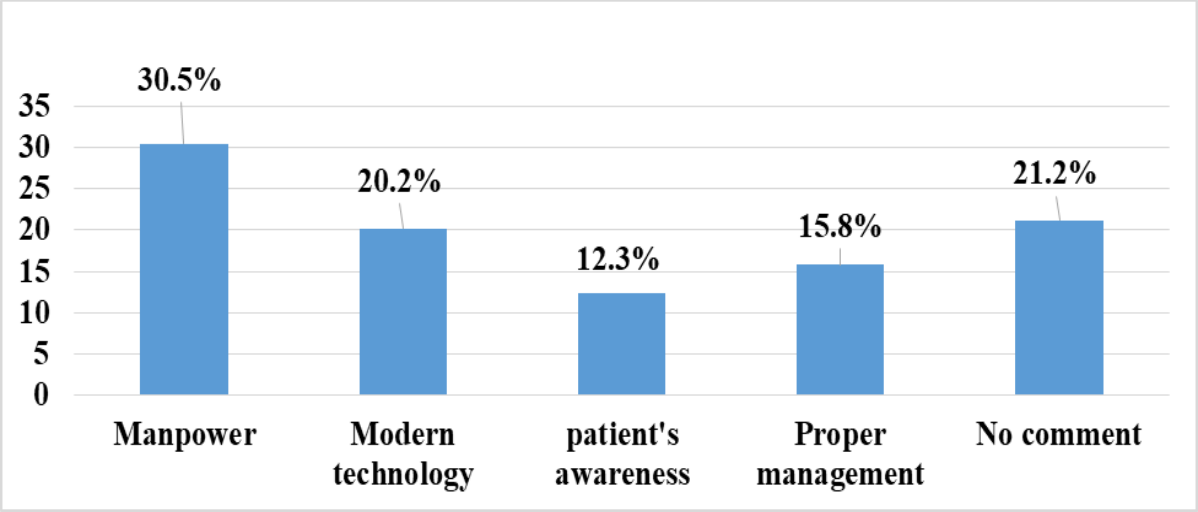

Figure 1: Distribution of participants according to comments of better service (n=203)

DISCUSSION

Outpatient service of medicine, surgery, paediatric and family planning were open in all three Hospitals. Number of patients were decrease in all three tertiary hospitals during COVID-19 Pandemic. A study was conducted where the number of outpatient visit declined by nearly 60 percent in the pandemic.[7] Facility of triage were present at Shaheed Suhrawardy Medical College OPD, at

Dhaka Medical College Hospital and Bangabandhu Sheikh Mujib Medical University there was no triage in general OPD but triage facility was available at COVID unit. At triage there was facility of screening, separate waiting area for normal patients and respiratory symptom patients with availability of necessary instruments (thermometer, BP machine, pulse oximetry etc.). In this study flu-corner service was available at Shaheed Suhrawardy Medical College Hospital, medicine outdoor, during COVID-19 pandemic. Duration of the flu corner was 19 months, about 60 to 70 patients were served in flu-corner per day. Most of the patients came with the complain of fever, cough and breathing problem. At Dhaka Medical College Hospital and Bangabandhu Sheikh Mujib Medical University there was no flu-corner in general outpatient department. In those hospitals fever clinic service was available at other premises of the hospital. A cross- sectional study done in India, where flu clinics had been started of the sites to screen patients reporting with symptoms of fever, cough or respiratory difficulties for suspected COVID-19. On average 30 patients attended in these fever clinics.[4]

Operation service was available all three hospitals during COVID-19 pandemic. COVID-19 report had to submitted before operation. Operation theater was disinfected every day to control infection. A study done by The Società Italiana di Chirurgia Ambulatoriale Day Surgery (SICADS) Board. (2021) Recommendations for outpatient activity in COVID-19 pandemic. Where mentioned that surgery should have done with a proper selection and screening of all-day cases, careful scheduling of surgical organization in the operating room, and planning of the postoperative pathway are the goals for a feasible, safe, and effective resumption of DS activity. All the instruments and OT room should be disinfected after every operation. Accurate COVID tests are essential before surgery. The RT-PCR is the most sensitive test to ensure a safe surgical procedure.[8] In paediartic outdoor service beside regular consultation and treatment, vaccination service and Shishu Bikash Kendra service was available. At Shaheed Suhrawardy Medical College Hospital vaccination service was available 3 days in a week and Shishu Bikash Kendra was open 6 days in a week. Vaccination service and Shishu Bikash Kendro were open 6 days in a week in both hospitals. Family planning service was open 6 days in a week during COVID-19 pandemic in all three hospitals. In this study, all the service providers mentioned that they had availability of soap, water and wash basin in their sites.72.4% respondents mentioned they had adequate hand sanitizer and hand rub for their hand hygiene. A study done in Pakistan where Majority of them had adequate facility hand sanitizing (99%) and washing (84%).[1] Only 42.9% respondents said they had facility of proper ventilation in their consultation room. Majority of the respondents57.1% said they had not proper ventilation facility in their consultation room. Almost similar study done in India, Primary Health Care Facility Preparedness for Out Patient Service Provision During the COVID-19 Pandemic in India, respondents reported adequate handwashing service were unavailable at 23.5% sites and 57% of the participants reported inadequate ventilation at their PHC sites.[4]

A large percentage of service providers mentioned that they had adequate amount of personal protective equipment. But 67.5% respondents reported they had not adequate amount of N -95 mask. Another study stated that healthcare professionals faced acute shortage of masks, hand gloves and personal protective equipment (PPE) to protect themselves from COVID-19 infection.[2] In this study, majority (62.1%) of the service provider mentioned they had adequate donning doffing facility. Among the respondents 61.6% got COVID-19infection. Most of the service provider (99%) took vaccine against COVID-19.

Among the respondents 55.2% service providers used plastic or glass protector during consultation of the patients.67% service providers maintained physical distance while consult with patients. All service provider used personal protective equipment during examination of the patients.100% respondents used facemask, 61.1% respondents used gloves, 23.6% respondents used gown and 11.8% respondents used face-shield during examination of the patients. Maintaining social distance (a minimum of 1 meter) from persons with respiratory symptoms. Additional precautions are required by health care workers to protect themselves and prevent transmission in the healthcare setting.[9]In this study among service provider only 42.4% respondents reported they got training regarding outpatient service during COVID-19 pandemic. Majority (57.6%) of the respondents mentioned they did not get training regarding outpatient service during COVID-19 pandemic. A cross-sectional study done where mentioned lack of task-specific education and training programs 54.8%. 56.2% respondents reported

about lack of manpower. 53.2% respondent mentioned they had skilled supportive staff. and 46.8% said about less skillful supportive staff. Another study showed, 38.7% insufficient and less skillful supportive staff.[10]Majority (60.1%) of the respondent in this study felt anxiety, 61.6% respondent felt high risk during outpatient service in COVID-19 pandemic. Insufficiency of medical staff and equipment resulting in excessive workload and safety hazard. This workload and constant fear of infection both for themselves and for their family members put participants under substantial psychological stress. Another study conducted where among the service providers 30.5% respondents suggested to increase manpower and 20.2% respondents suggested to use modern equipment e.g., digital BP machine and technology e.g., video conferencing for better outpatient service management during COVID-19 pandemic.[2] In this study the sample was taken conveniently, so there was a chance of bias.

CONCLUSION

The study explores the service provision of outpatient department during COVID-19 pandemic in Tertiary Hospital. In this study, we found that all services were available during COVID-19 pandemic. The number of the patients were decrease. Separate entry exit, thermal scan at entry point was available for everyone including patients, attendants and hospital staffs. Flu corner and triage facility were available all three hospitals. Most of the service providers mentioned they had available Personal Protective Equipment hand rub and sanitizer. Most of them they had not proper ventilation in their room. Majority of service providers stated that they used plastic/glass barriers during consultation of the patients and maintained physical distance. Among them some were got training regarding service of outpatient department during but some of them did not get. Some of respondents commented about increase manpower, some commented about modern technology and equipment and some respondents mentioned about increase patient awareness for better service during COVID-19 pandemic. The study recommends that special training program could be arranged for service providers regarding outpatient patient department service during pandemic along with refreshers at a regular interval. Proper ventilated consultation room should be ensured to minimize infection. Digitalized equipment can be provided for better service provision.

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