

Common Health Problems of ‘Forcibly Displaced Myanmar Nationals’ “(FDMNs)” of Bangladesh

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Abstract:

Background: Around a million FDMNs have settled in Cox’s Bazar, the southeast coastal district of Bangladesh. The geographically proximate country of Rakhine state of Myanmar following armed conflict in this area in August 2017 and created a unique humanitarian crisis. It is important to know the current health status of FDMNs because, without this information, equal and equitable health service provision is not possible. So, we conducted this study to explore the common health problems of FDMNs residing in camps of Cox’s Bazar, Bangladesh.

Method: This descriptive observational study was conducted from January 2018 to July 2019 at Cox’s Bazar Medical College Hospital, Cox’s Bazar which first prioritized referred tertiary hospitals for FDMNs.

Result: Among study FDMNs, Age ranges from 3 months to 97 years with a median age of 40 (25-60) years and male to female representatives were almost equal (51.6% male and 48.4% female). Majority of the male were farmers (engaged in agriculture, livestock and fish farming) and the females were house makers. One third of the primary respondents have formal education (i.e. religious education) in Myanmar. More than 30% of the participants reported having H/O recent death of family members in Myanmar with a median number of two members due to recent violence. 37% FDMNs were malnourished out of them 14.7% were severe. BCG scar marks were found in 70% and only 40.7% were vaccinated with other vaccines in under five children. 75.4% FDMNs were dependent on unqualified village doctors for treatment. The most common NCD among the FDMNs people were COPD, DM, and HTN with risk factor tobacco use and frequent betel nut chewing. Chronic liver disease with underlying hepatitis C or Hepatitis B infection, HIV and TB were more common. Nearly one third FDMNs were clinically anemic. 42.9% of the participants reported do not won and use LLN in Myanmar. 73.2% FDMNs have knowledge about ORS use in diarrhea. Predominant diseases among admitted primary respondents were CLD (15.7%) followed by COPD (13%), pregnancy complication and Injury (7.2%). Major causes of death in admitted FDMNs were COPD with its complication (25%) Cardiac disease (20%), CLD with Hepatic encephalopathy (15%), CNS infection and Septic shock (10%).

Conclusion: This study identifies common health problems of the FDMN also called Rohingya refugees in Bangladesh. FDMNs in Bangladesh are under significant health risks and necessary to scale up targeted health care policy and improvement of local GOB and non-Government health care facilities for them.

Key words: FDMNs, Health problems, Bangladesh



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Introduction:

World witnessed violence against the Muslim ethnic minority FDMNs in late August 2017 in Rakhine State, Myanmar, a new massive influx started of FDMNs to Cox’s Bazar, Bangladesh. Most of the FDMNs settled in Ukhyia and Teknaf Upazilas of Cox’s Bazar, a district bordering Myanmar identified as the main entry area for border crossings¹. As a non-signatory to the 1951 Refugee Convention, the Bangladesh Government officially refers to them as ‘Forcibly Displaced Myanmar Nationals’ or FDMNs². To escape from killing, rape, and arson in 2017, almost 1 million now live in refugee camps in Cox’s Bazar. Along with poor sanitation, scarcity of food, overcrowded sheltering, the health situation

is precarious³. From the very beginning, Essential primary health care for FDMNs are being provided by the Ministry of Health and Family Welfare of the People’s Republic of Bangladesh, United nation, NGOs and International humanitarian organizations .Patient needing secondary and tertiary health care are referred to Cox’s Bazar Medical College Hospital and Chattogram Medical College Hospital through local Upazilla Health Complex (Ukhiya and Teknaf). This Descriptive study aims to comprehensively identify and understand the health problems of the FDMNs presenting for health care at Cox’s Bazar Medical College Hospital that can help to policymakers to reshape the health care system and streamline assistance for FDMNs.

Method and materials

This study was conducted at Cox’s Bazar Medical College Hospital, Cox’s Bazar which first prioritized referred tertiary hospitals for FDMNs. It is a descriptive observational study and data was collected from January 2018 to July 2019. The prospective data of FDMN was collected from all admitted patients at Cox’s Bazar Medical College Hospital, Cox’s Bazar by using a standard structured questionnaire/Case Record Form (CRF). A questionnaire was developed (written in English , translate in Bangla) by Principal and Co-investigators to conduct face to face interviews among FDMN patient containing Demographics (age, sex, educational status, occupation, family members etc.), date of admission and hospital stay period (to assess seasonality) and category of illness (communicable disease/ nutritional/ Maternal /Neonatal status, NCD, trauma /Injury , outcome including death etc.).The study was conducted with the help of Intern doctors working in Cox’s Bazar Medical College Hospital, Cox’s Bazar. All data interviewers are trainees as part of completing medical graduate. They are also able to speak and understand in local language i.e. FDMNs dialect. Verbal consent from each interviewee was obtained following a detailed explanation of the survey methodology, including its purpose and its voluntary nature and explaining the participants’ right to leave the interview at any time. By obtaining consent, Care Record Form (CRF) was read by data collectors to study people or in case of minors ,the patient’s parents or guardian and data was recorded in case record form. This questionnaire was accomplished within 5-7 minutes. Although no sample size was calculated initially, but the aim was to capture data from all FDMNs admitted for health care at Cox’s Bazar Medical College Hospital, Cox’s Bazar and at the end of study period sample size is 459.All data were collected, compiled and statistical analysis was done by SPSS v. 22 (Statistical Package for Social Science Version 22) for Windows and presented in tabulated form.

Results:

The study included 459 FDMNs. Age ranges from 3 months to 97 years with a median age of 40 (25-60) years. Majority of the refugees in both sex were in the age group of 46-60 years. Among them male to female representatives were almost equal (51.6% male and 48.4% female). (Table-1).

Table 1 : Age distribution of the participants (n=459)

Age groups	Male	Female	Total
0-5 years	16 (6.8)	11 (5.0)	27 (5.9)
6-15 years	21 (8.9)	12 (5.4)	33 (7.2)
16-30 years	44 (18.6)	58 (26.1)	102 (22.2)
31-45 years	52 (21.9)	50 (22.5)	102 (22.2)
46-60 years	64 (27.0)	65 (29.3)	129 (28.1)
>60 years	40 (16.9)	26 (11.7)	66 (14.4)
Total	237 (51.6)	222 (48.4)	459 (100)

Data were expressed as frequency (percentage).

Majority (63.4%) of the FDMNs admitted in the Medicine ward of the hospital followed by 27.2% in surgery ward, 6.3% in the pediatric ward and 3.1% in Gynae & Obstetric ward Majority (77.3%) were the referred cases with 22.7% cases came by won. Median duration of hospital stay by the refugees were 5 (IQR: 3 – 7) days (Table-2).

Table-2 : Distribution of the participants by their admission status, admission wards and duration of hospital stay (n=459)

Characteristics	Frequency	Percentage
Name of admission ward		
Medicine ward	291	63.4
Gynae & Obstetric ward	14	3.1
Surgery ward	125	27.2
Pediatrics ward	29	6.3
Admission status		
Referral	355	77.3
Seek management by won	104	22.7
Duration of hospital stay (days)		
Median (Interquartile range)	5 (3 - 7)	

Median family member of the refugees was 7 (IQR: 6-9). Majority of the male refugees were farmers (engaged in agriculture, livestock and fish farming) and the majority of the females were house makers. Though one third of the refugees reported to have formal education in Myanmar most of them received religious education only. More than 30% of the participants reported having H/O recent death of family members in Myanmar with a median number of two members. (Table 3).

Table-3 : Social parameters of the refugees (n=459)

Variables	Frequency	Percentage
Total number of Family member		
Median (IQR)	7 (6 – 9)	
Occupation in Myanmar		
Farmer	148	32.2
House maker	127	27.7
Student	53	11.5
Jobless	27	5.9
Day Labor, worker	55	12.0
Small business	10	2.2
White color job	9	2.0
Others*	30	6.5
Received formal education	168	36.6
H/O recent death of any family member due to recent violence	139	30.3

*Included retired people and children.

170 (37%) of the included refugees are malnourished out of them (14.7%) are severe and (23.5%) are moderately malnourished. BCG scar marks were found in 19 (70%) and only 11 (40.7%) were vaccinated with other vaccines among 27 under 5 children. 73.2% FDMNs have knowledge regarding ORS use in diarrhea. Nearly half of them had reported consuming tobacco in the form of cigarettes (46.3%), bidi (38.9%) and other oral forms (14.8%). Only less than one third (26.4%) of participants had seen graduate doctors in Myanmar. 6.5% and 7.2% were hypertensive and diabetic. About 7.8 % were infected with Hepatitis B or Hepatitis C Virus. Nearly one third FDMNs are clinically anemic. 42.9% of the participants reported not to won and use LLN in Myanmar (Table -4).

Table- 4 : Nutrition, vaccination status and anemia and Health education of the participants (n=459)

Variables	Frequency	Percentage
Nutritional status		
Normal	280	61.0
Malnourished	170	37.0
Obese	9	2.0
Degree of malnutrition (n=170)		
Mild	105	61.8
Moderate	40	23.5
Severe	25	14.7
BCG scar in <5 children (n=27)	19	70.4
Other vaccination status in <5 children (n=27)		
Vaccinated	11	40.7
Unvaccinated	14	51.9
Not known	3	11.1
Ever use ORS	336	73.2
Consumed tobacco	229	49.9
Type of tobacco		
Cigarette	106	46.3
Bidi	89	38.9
Other Oral form	34	14.8
Ever seen by a MBBS doctor	121	26.4
Previously diagnosed as HTN	30	6.5
Previously diagnosed as DM	33	7.2
Known the hepatitis B/C virus status	36	7.8
Clinically anemic	144	31.4
Use of LLN in Myanmar	262	57.1

Common laboratory test profile were Chest X-ray 118 (25.7%), USG OF Whole abdomen 150 (32.6%), CT scan of brain 53(11.5%), Echocardiography 45(9.8%) Hematology and Biochemistry 218 (47.4%) ECG 143(31.1%) and Urine for RME 220 (47.9%) (Table – 5).

Table - 5 : Major Laboratory test done for diagnosis in the refugee patients

Name of the test	Frequency	Percentage
Chest X-ray	118	25.7
USG OF Whole abdomen	150	32.6
CT scan of brain	53	11.5
Echocardiography	45	9.8
HBV positive	30	6.5
HIV positive	14	3.1
Fracture on X-ray	13	2.8
ECG	143	31.1
Hematology and Biochemistry	218	47.4
Thyroid test	23	5.0
OGD	36	7.8
Urine for RME	220	47.9
Others	60	13.0

Predominant Disease profile of primary respondent shows that CLD was 15.7% (72), COPD was 13% (64), Injury 33(7.2%), MSK (Back and Joint) Pain 25(5.4%), Cancer 22(4.8%), Heart disease 19(4.1%), Acute Abdomen 17(3.7%) Hypertension 15 (3.3%) and Pregnancy Complications 13(2.8%) Diabetes and TB 12(2.6%), other diseases include Viral Hepatitis and Pneumonia 11(2.4%), Hernia and Renal Stone 10 (2.2%). (Table - 6)

Table - 6 : Diagnosis of the patients (n=459)

Diseases	Frequency	Percent
CLD	72	15.7
COPD	64	13.9
Injury	33	7.2
MSK(Back and Joint)Pain	25	5.4
Cancer	22	4.8
Heart disease	19	4.1
Acute Abdomen	17	3.7
Hypertension	15	3.3
Anemia	15	3.3
Pregnancy Complications	13	2.8
Diabetes	12	2.6
TB	12	2.6
Viral hepatitis	11	2.4
Pneumonia	11	2.4
Hernia	10	2.2
Renal Stone	10	2.2
Neuropathy	9	2.0
Peptic ulcer	9	2.0
Kidney failure	9	2.0
Stroke	5	1.1
Hemorrhoids	5	1.1
Asthma	4	0.9
HIV	4	0.9
Diarrhea	4	0.9
Meningitis/Encephalitis	4	0.9
Psychiatric conditions	3	0.7
Epilepsy	3	0.7
Skin disease	3	0.7
Sepsis	3	0.7
Acute febrile illness	2	0.4
Poisoning	2	0.4
Liver abscess	2	0.4
Malaria	1	0.2
Others	26	10.0

The total injured FDMNs are 33 (7.2%) of primary respondents reported injuries among themselves by assault, out of them 12(36.4%) by sticks, sharp cutting 11 (33.3%) and bullet 10 (30%). (Table - 7).

Table-7 : Nature of injury among the injured person (n=33)

Nature of Injury	Frequency	Percent
Sticks	12	36.4
Sharp cutting injury	11	33.3
Bullet	10	30.3
Total	33	100

Among the admitted study population 310(67.5%) were improved and discharged followed by 66(14.3%) were referred to higher centers for better management and 20(4.4%) had died (Table - 8).

Table - 8 : Outcome of hospital admission (n=459)

Outcome	Frequency	Percent
Improved	310	67.5
Referred	66	14.3
Died	20	4.4
Absconded	63	13.7

Major cause of death in admitted FDMNs people is COPD with its complication (25%) Cardiac disease (20%), CLD with Hepatic encephalopathy (15%), CNS infection and Septic shock are (10%). (Table-9).

Table - 9 : Cause of death (n=20)

Cause of death	Frequency	Percent
COPD with Type II resp. failure	5	25
Cardiac disease (IHD, HF etc.)	4	20
CLD with hepatic encephalopathy	3	15
Meningitis /Meningo-encephalitis	2	10
Septic Shock	2	10
Renal failure	1	5
Geriatric illness	1	5
Total	20	100

Discussion:

FDMNs in Bangladesh are under crucial health risks and it has become a great challenge to identify their health problem to scale up health services.

In this study, 459 FDMNs included, where the Male and Female sex ratio is almost equal. Age ranges from 3 months to 97 years with a median age of 40 (25-60) years. Majority of the refugees in both sex were in the age group of 46-60 years. The median and interquartile range (IQR) age was 39 (25-55) years and 51.6% were males. This study result is correlated by the Health sector bulletin of the Humanitarian response team and study of Rahman MR Et.al^{3, 4, 6}.

Majority of admitted FDMNs were the referred cases and came with the help of different humanitarian agencies where only near one fifth cases came by won. This result reflects the other study where shown distance and inability to pay health care cost were the main difficulty to admit by won⁷. This survey identified a clear need to improve access for FDMNs to the host community health services. Median duration of hospital stay by the refugees were 5 (IQR: 3 – 7) days^{5, 6}. Median family member of the refugees was 7 (IQR: 6-9). Majority of the male refugees were farmers (engaged in agriculture, livestock and fish farming) and the majority of the females were house makers. Only one third (36.6%) of the primary respondent reported to have formal education in Myanmar, where most of them received religious education only and Similar preponderance of illiteracy (70%) was reported by Masud et. al study and Bhatia et al. reported the vast majority of FDMNs 76.0% having had no education, and 52.6% of FDMNs children under the age of 15 were not attending school^{8, 11}. But this data conflict with the result of the Rahman et al. study where only 24% primary respondents reported as not having any education⁵. In Myanmar, about one in five women and men aged 6 and older have no education²¹. More than 30% of the participants reported to had H/O recent death of family members in Myanmar due recent violence with a median number of two members which corroborate recent violence in Rakhine State and consistent with finding of MSF study⁶.

This study showed nutritional deficiencies (37%) are an alarmingly common problem among FDMNs, especially among children, out of which (14.7%) are severe and (23.5%) are moderately malnourished. This similar finding is also found by Joarder et al and Leidman et al. study^{9, 10}. High prevalence of anemia among FDMNs found in this study which is consistent with Leidman et al. study¹⁰. This study found that the vaccination rate in Myanmar was very low and the same finding found in Nozaki et al. study where the overall complete vaccination rate is 55.4% in Myanmar¹¹.

The diphtheria epidemic in Myanmar Refugee in late 2017-2018 reflects a clear connection to this study's result data^{7, 12}. Risk factors for NCDs are observed in the FDMNs and the host population including tobacco use, particularly by men, frequent betel nut chewing by men and women, and indoor air pollution from household cooking in the camps. Half of primary respondent had reported to consumed tobacco in the form of cigarette (46.3%), bidi (38.9%) and other oral form (14.8%)²⁰. Over one third (32%) of men age 15-49 group smoke cigarettes and 14% smoke pipes or cheroots²¹. Only less than one third of FDMNs had seen graduate doctors in Myanmar. Rakhine State has less developed healthcare compared to the other states. Access and utilization of health services is made difficult for FDMNs because of their statelessness and severe restrictions in their movements. They have restricted access to pursue university education in Myanmar and consequently, government and NGO health facilities within Rakhine State are staffed by national medical staff of other ethnicities, often from other parts of the country, serving one-year assignments in Rakhine State at the commencement of their medical careers. Restricted access to formal health services including public hospitals and government clinics as a result of long-standing discrimination and travel restrictions may account for the poor health outcomes observed among FDMNs¹⁹. Our study found that 6.5% and 7.2% participants knew their own hypertensive and diabetic status. About 7.8 % were infected with Hepatitis B or Hepatitis C Virus. Nearly one third FDMNs are clinically anemic where the Health Sector Situation Report of Rohingya Refugee, December 2017, fifty percent of the general FDMNs is anaemic²⁰. Malaria is a major public health problem in Myanmar, with more than two-thirds of the country's population living in areas of malaria risk. Health awareness regarding malaria prevention near half of primary reported did not too won and use LLN in Myanmar. Only 14% of households owned enough ITNs to cover all household members Use of an ITN: Sixteen percent of the household population, and .ORS The MDHS results show that knowledge of ORS packets for treatment of diarrhea is nearly universal among women in Myanmar according to all background characteristics other than educational level. Women with no education are less likely to know about ORS packets (78%) than women at higher educational levels (>98%). Top NCD in FDMNs people were Chronic Liver Disease (CLD), Chronic obstructive Pulmonary Disease (COPD), Injury, Musculoskeletal Pain, Cancer, Heart disease, DM, HTN and pregnancy related complication. Similar NCD profile was found by Public Health Situation analysis and interventions –October 2017, Regional office for South-East Asia, World Health Organization and Joarder et al^{9, 18}. Risk

factors for NCDs are observable in the FDMNs and host population including tobacco use, particularly by men, frequent betel nut chewing by men and women, and indoor air pollution from household cooking within the camps¹⁸. HCV, HIV, TB, HBV, Acute diarrhea and Malaria were common Communicable disease (CD) in admitted FDMNs people. Infectious diseases are major contributors to ill health among refugee populations across the world²⁵. A post-arrival medical assessment of European and African refugees in Western Australia also found that infectious diseases like TB (55.0%), hepatitis B (56.7%), syphilis (5.0%), malaria (8.0%), and giardiasis (9.5%) were quite common among the refugee population. Myanmar is one of the top 30 countries with the highest TB burden⁹. The unavailability of safe drinking water, poor sanitation, overcrowded living place, needle sharing, undernutrition and unprotected sexual relationship makes the refugee population highly vulnerable to transmissible diseases. One most finding of the study is one large proportion of primary respondents injured by assault including Stick, Bullet and sharp cutting. But this crude estimate will be more high as one study showed that almost two-thirds [64%] of respondents reported that violence was perpetrated against members of their hamlets and estimated that 7803 FDMNs died from violent and non-violent causes associated with the August, 2017, attacks and subsequent they fled to Bangladesh²⁶.⁵ In this study top five cause of death in primary respondent are COPD with Type II respiratory failure, Cardiac disease (IHD, HF etc.), CLD with hepatic encephalopathy, Meningitis / Meningo-encephalitis and Septic Shock which is accordance with CDC report of death in Myanmar²⁷.

Conclusion:

The health situation of FDMNs is precarious. Both Infectious (particularly HCV, HIV, TB and HBV) and NCD are common in FDMNs. Finally, The GoB, in collaboration with national and international organizations, should improve the availability, accessibility, and quality of health services provided to these people. We strongly recommended that health problems specific strategies and a multistakeholder should apply in FDMNs of Bangladesh. Further research is warranted to identify the health problems along with their actual distribution and determinants among FDMNs.

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