

## Management of Emergency Services in Some Selected Upazila Health Complexes.

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*A cross sectional descriptive type of study was conducted in the Emergency Departments of Ghatail, Kalihati, Gopalpur, Bashail & Nagorpur Upazila Health Complexes under Tangail District to find out the available facilities, availability of service providers, waiting time of patients for receiving service, emergency referral rate and to assess patients' and doctors' satisfaction regarding services in the Emergency Departments. A total of 105 patients & 10 doctors were interviewed, using structured questionnaires and facilities were observed through a check list. Results of the study revealed that majority of the patients (75.2%) did not find doctor in the Emergency Departments immediately and in 94.3% cases they found either Medical Assistant (MA) or Nurse or Pharmacist. 5.7% patients did not find any health personnel in the Emergency Departments immediately. 55% attending the Emergency Departments did not receive doctors' service. Waiting time of the most patients ( 58.1% ) for receiving health care was less than 2 minutes. 70% patients did not get urgent investigation facilities in the Upazila Health Complexes. 59% patients were discharged after treatment, 33.3% were admitted and 6.7% were referred to higher centers. 58.4% patients using toilets were poorly satisfied with the cleanliness of toilets. 91.4% patients were satisfied with overall management of the Emergency Departments. According to the doctors' opinion, patients' and attendants' attitude is good but sometimes not satisfactory. Most of the doctors were not satisfied with their job and think the Emergency Departments not well equipped and not well staffed.*

### Introduction:

Emergency departments of hospitals are often the point of major public health interest and are the most vulnerable to criticism. The reputation of a hospital rests to a large extent on the service of emergency department. The sudden and

unexpected nature of the emergency produces panic and psychological disturbance of the relatives, which must be appreciated and born in mind in organization and management of services<sup>1</sup>. Emergency department is primarily meant for immediate medical attention and resuscitation of seriously ill patients. They should have priority over less serious patients. Emergency services bring about an interface between the hospital and the community, which is emotionally surcharged. The emergency department provides the first impression on patients, relatives and friends who come along with the patient. The first impression must be a positive one. Quick and competent care can save lives and also reduce the sufferings and duration of illness<sup>2</sup>. For proper management of emergency services doctors, nurses and other health personnel should be efficient, sincere and sympathetic to patients. Equipments for transportation and resuscitation should also be adequate<sup>4</sup>.

Upazila Health complexes are the primary level health facilities in Bangladesh to meet the health care demands of the majority of the population residing in the rural areas<sup>3</sup>. The emergency departments play a vital role in its service<sup>2</sup>. It is reported that Road Traffic Accidents, burns, drowning, poisoning, snake bites, sudden attack of illness etc. are the common emergency health events with which people attend the Upazila Health complexes<sup>4</sup>. Provision has to be made for dealing these emergencies promptly and efficiently<sup>5</sup>. Accidents and sudden attack of illness need quick and competent health care in emergency department. Moreover, effective and efficient emergency health care can save many lives and also can reduce sufferings, duration of illness and disability. The emergency departments of the Upazila Health Complexes should be managed efficiently and effectively<sup>6</sup>.

This study was designed as an attempt to explore out the information regarding management of emergency services in Upazila Health Complexes. The study results will enrich the planners, managers, policymakers and health care providers to take positive measures to improve the management of emergency services in the Upazila Health Complexes of our country.

### Methods:

The descriptive cross-sectional study was conducted during the period of March 2004 to June 2004. Out of six divisions of Bangladesh, Dhaka division was randomly selected by

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lottery. Then out of 17 districts of Dhaka division, Tangail district was selected randomly also by lottery. From 10 rural or outline Upazilas of Tangail district five Upazilas were selected randomly namely Ghatail, Kalihati, Gopalpur, Bashail and Nagorpur. One hundred and five patients attending the emergency departments and 10 doctors were selected purposively from the above mentioned study places. Data were collected through self-constructed questionnaires-one for the patients and another for the doctors. Two draft questionnaires were prepared, designed to meet up the objectives of the study and were pre-tested. Hospital records were reviewed for total number of emergency patients and for the patients who were referred to higher centers. A checklist was use to find out the existing facilities in the Emergency Department and to find out the availability of the service providers in the Emergency Department. Collected data was checked, verified and edited for consistency to reduce error. Finally data was analyzed in computer by using Statistical Package for Social Science ( SPSS ) for window version 11.0

### Results:

The study results reveal that the mean age of patients was 31.28 years. 73% (77) patients were male and 27% (28) patients were female. 71% (75) patients were married and 29% (30) patients were unmarried. 91% (96) patients were Muslim and Nine percent patients were Hindu. Most of the patients i.e. 74.3% (78) live in rural area. Most of the patients i.e. 51.4% (54) had primary level of education and 6.7% (7) were illiterate. 22.9% (24) patients were house wives, 21.9% (23) were students, 18.1% (19) were cultivators, 14.3% (15) were businessmen, 9.5% (10) were rickshaw pullers and 7.6% (8) patients were in service. Most of the patients i.e. 55.2% (58) were in the income group of taka >5000. Mean family member of the patients was 5.47.

Out of 5 Upazila Health Complexes ( UHCs ) 2 have toilet facility and remaining 3 do not have. One toilet was found clean and another was found not clean. Among 5 UHCs 3 have functioning X-Ray machines and 2 have non-functioning X-Ray machines. 2 UHCs were supplied with X-Ray film and remaining 3 were not. All the 5 UHCs have dark room and Radiographer. (X-Ray facilities for the Emergency Department in UHCs are available only in the morning shift.) All the 5 UHCs have facilities of Blood for Malarial Parasite ( MP ), Urine for Albumin and Sugar for the Emergency Department only in the morning shift.

Table I : General facilities in the Emergency Department (5 Upazila Health Complexes)

Facility	Present	Absent
Sign posting and display	3	2
Safe drinking water supply	5	0
Patient trolley or stretcher	5	0
Emergency trolley (with minor surgical set)	1	4
Screen and stand	2	3
IV infusion stand and set	5	0

Table II: Facilities in the Emergency Department with their condition (Total 10 visits)

Facility	Present	Functioning	Non-functioning	Absent
Register book	10	Maintained	0	0
Waste basket	6	N.A	N.A	4
Sputum bowel	10	N.A	N.A	0
Stethoscope & BP Machine	10	10	0	0
Thermometer	10	10	0	0
Tongue depressor	10	10	0	0
Auroscope	4	1	3	6
Tape measure	1	0	1	9
Weighing machine	3	2	1	7
Height scale	3	2	1	7
Torch light	10	9	1	0
Oxygen cylinder	2	2	0	8
Emergency generator (Alternate power supply)	10	6	4	0
Suction machine	2	2	0	8
Suturing materials	9	N.A	N.A	1
Canulas	1	N.A	N.A	9
Disposable syringe & needle	9	N.A	N.A	1
Glove	7	N.A	N.A	3
Sterile gauze/ Micropore/Plaster	10	N.A	N.A	0
Stomach tube	10	N.A	N.A	0
Nesogastic tube	10	N.A	N.A	0

During all the visits Inj. Diclofenac and Inj. Lignocaine 2% were found present. Tab. Paracetamol, Inj. Hysomide, Inj. Dexamethasone, Inj. Atropine were found in most of the visits. Drugs like Inj. Magnesium Sulphate, Inj. Hydrocortisone, Inj. Pathedine, Inj. Aminophylline, Inj. Gardenal Sodium, Inj. Antihistamin, Inj. Amoxycilin, Lignocaine jelly, Tab. Tri-nitoglycerine and ORS were not present in any visit.

Out of 10 visits by the researcher doctors were found present in 5 visits and absent in 5 visits. Medical Assistant ( MA ) / Nurse / pharmacist and ward boy / Aya were found present in all visits. Sweeper was found present only in 1 visit and absent in 9 visits. Most of the patients i.e. 61.9% (65) reached the Emergency Department ( ED ) by walking. 37.1 (39) patients reached the ED with the help of relatives and only 1% (1) patient reached by stretcher.

9.5% (10) patients needed urgent investigation and 30% (3) of them got it and 70% (7) did not get it (due to lack of



facilities of required investigation in the ED in that shift). 59% (62) patients were discharged after treatment, 33.3% (35) were admitted to IPD and 6.7% (7) were referred to higher centers. Only one (1) patient were not received by the doctor (cool case advised to come to Out Patient Department / OPD on the next day).

Table III : Presence of doctor and Medical Assistant ( MA )/ Nurse/ Pharmacist in the Emergency Department immediately as stated by the patients

Type of Employ	Found present	Found Absent	Percent of found present	Percent of found absent
Doctor	26	79	24.8	75.2
MA/Nurse/pharmacist	99	6	94.3	5.7

Table IV : Waiting time of the patients for receiving Health care in the Emergency Department

Waiting time	Frequency	Percent
Up to 2 minutes	61	58.1
2-4 minutes	23	21.9
4-6 minutes	13	12.4
6- 10 minutes	7	6.7
>10 minutes	1	1.0
Total	105	100.0

Table V : Referral rate of the patients in the Emergency Department

Study place	Total patients	Referred patients	Referral rate
Ghatail	42	4	9.5%
Kalihati	34	2	6.8%
Gopalpur	22	1	4.5%
Bashail	24	1	4.1%
Nagorpur	21	2	9.5%
Total	143	10	7.0%

Out of 12 patients using toilet in the ED 58.4% (7) were poorly satisfied, 33.3% (4) were satisfied and 8.3% (1) patients was not satisfied regarding cleanliness of toilet in the ED. 55% (58) patients did not received doctor's service and 45% (47) patients received doctor's service. Most of the patients i.e. 91.4% (96) were satisfied with overall management of the ED.

80% (8) doctors stated patients' attitude as good but sometimes not satisfactory. 90% (9) doctors stated

attendants' attitude as good but sometimes not satisfactory. 90% (9) doctors stated that violence was shown by the patients/ attendants occasionally. 80% (8) doctors faced problems occasionally in providing health care service properly. 55.6% (5) doctors faced problems to provide health care service from attendants, 33.3% (3) from both authority and attendants and 11.1% (1) from authority only.

Out of ten (10), seven (7) doctors did not think the ED well staffed. Shortage of staff mentioned was trained EMO, MA, Nurse, Ward boy and Sweeper. Out of ten (10), nine (9) doctors were not satisfied with their job. Causes of job dissatisfaction mentioned by them were unsuitable working environment, overload of work, lack of necessary drugs and logistics, unsatisfactory salary, no promotion, lack of accommodation, political mal-influence, unstable and flexible roster duty, unsatisfactory behaviour of the authority.

### Discussion:

The findings of age are consistent with the study of Kaiser FR<sup>7</sup>, Bhuiya M Faruk<sup>8</sup> and Dr. Begum Aleya, done on of the Emergency Department of Dhaka Medical College Hospital, who found majority of the patients (65%) were of young age group<sup>9</sup>. Male persons are more as they work outside more and they are more prone to accident and other acute conduction. Majority of the patients (91.43%) were Muslim which was consistent with the percentage of Muslims in Bangladesh.

From the checklist prepared as per Standard Operating Procedure ( SOP ) it was found that among 5 UHCs, three (3) UHCs have sign posting and display and remaining two (2) have not. All the 5 UHCs have safe drinking water supply, patient trolley or stretcher and IV infusion stand and set. 4 UHCs do not have emergency trolley (with minor surgical set) and 3 UHCs do not have screen and stand in the ED (Table-I & II). As per Standard Operating Procedure certain drugs must be present in the ED of UHCs. But most of those drugs were not found in the EDs.

It was seen that 75.2% (79) patients found doctor absent in the ED immediately. 94.3% (99) patients found MA/Nurse/Pharmacist present in the ED immediately and 5.7% (6) patients found MA/Nurse/Pharmacist absent in the immediately (Table-III). 61.9% (65) patients reached the ED by walking and 37.1% (39) with the help of relatives and only 1% by stretcher. This indicates the absence of patient trolley in the ED and or lack of hospital staff to pull it.

Regarding waiting time the highest percentage i.e. 58.1% (61) required waiting time with 2 minutes followed by 21.9% (23) within 2-4 minutes. Only 1% patients need waiting time >10 minutes (Table-IV). This was much



satisfactory than the results of the study of Rhaman H<sup>10</sup> and Dr. Begum Aleya where she found waiting time 2-4 minutes only in 34.7% cases<sup>9</sup>. It correlates with the study of Bhuiyan where in 75.2% cases waiting time was less than 5 minutes<sup>8</sup>. In the workshop on "Health Care Quality Assurance" which was held in August 1995 it was suggested that waiting time should be within 10 minutes in serious cases and 20 minutes in less serious cases<sup>11</sup>.

Out of 105 patients 59.0% (62) were discharged after treatment, 33.3% (35) were admitted to the IPD and 6.7% (7) were referred to the higher centers. These findings show dissimilarity with the study of Dr. Mazid Abdul in Holly Family Red Crescent Medical College Hospital, Dhaka where 24.55% were discharged after treatment, >4.5% were admitted and one patients was referred to higher center<sup>2</sup>.

One hundred and five patients were asked for providing suggestions for better management of the ED. Among them 43 provided suggestions and remaining 62 did not. Most patients desired supply of medicine required for their treatment. Some patients suggested ensuring O<sub>2</sub> supply, X-Ray facilities and other modern facilities for emergency patients. Some patients expected the presence of doctor in the ED always. Some patients gave emphasis on cleanliness of the ED.

Ten doctors were asked about equipment status of the ED. Among them 9 doctors considered the ED not well equipped. Deficiency / shortage mentioned were O<sub>2</sub> cylinder, Sucker Machine, Nebulizer machine, Mini OT with necessary instruments, Emergency light, Weight Machine, AC, Trolley, Autoclave, Auroscope, Gloves, Adequate supply of medicine, Attached toilet, Attached doctor's room etc.

Referral rate of patients in the ED for Ghatail UHC was 9.5%, for Kalihati UHC 6.8%, for Gopalpur UHC 4.5%, for Bashail UHC 4.1% and for Nagorpur UHC it was 9.5%. The average referral rate was 7.0% (Table-V). No previous data was available to compare these findings.

From the study results it was found that emergency departments of Upazila Health Complexes are not so clean, not well equipped and not well staffed. Though the waiting time was satisfactory, doctor presence was poor. Most of the patients received services from either Medical Assistant or Nurse or Pharmacist. Diagnostic facilities play a vital part in the management of patients. Diagnostic facilities for the patients of the Emergency Departments in Upazila Health Complexes are available to some extent only in the morning shift. Life saving drugs is not available or inadequately available in the Emergency Departments. The results of the study indicate further study in this field. The findings of the study may be useful in the improvement of the management

status of the emergency services in the Upazila Health Complexes.

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