

Emergency Medical Service (EMS) Management In A Tertiary Level Hospital In Dhaka City

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Abstract

Objective: This study was to assess the emergency service management in Dhaka Medical College and Hospital. This is the largest teaching hospital in public sector under the Ministry of Health & Family Welfare, Government of Bangladesh.

Results: The ages of the patients were collected from the medical records of the emergency department. Among the 598 patients nearly 39.5% (236) were between 21-30 years of age, followed by 21.4% (128) between 11-20 years, 17.4% (104) between 31-40 years, 9.7% (58) between 41-50 years, 6.9% (41) was up to 10 years, 3.3% (20) between 51-60 years and least one was 1.8% (11) which were 61 & above years of age. The mean age of the patient's was 28.06 ± 13.01 years and the lowest and highest ages was 1 and 82 years respectively.

Majority of the patients 75.3% (452) were male and 24.7% (148) were female. maximum cases of emergency 44% (255) were due to Injury of any kind except RTA, 36.2% (210) were due to physical assault, 18.1% (105) were for road traffic accidents and a few of them 0.2% (1) for injury caused by biting by human beings, 0.9% (5) for injury caused by biting by other animals, 0.5% (3) for medical emergencies (HCR, COPD, Granuloma) and 0.2% (1) was brought dead.

Figure 2 shows that nearly 50% of the records of the patients at emergency of Dhaka Medical College and Hospital were found incomplete.

Key Words: Emergency Medical Service, Tertiary Level Hospital.

Introduction

Which area of service in the hospital, is neglected but requires considerable improvement? Undoubtedly, it is the emergency service. It is often no-man's land. Serious concern has been expressed regarding the inadequacy of emergency services, throughout the country, whether in the government or voluntary sector. It is a part of the outpatient department. Yet, the requirements are different.

The emergency services provide immediate, emergency diagnostic and therapeutic care to patients with:

- Injuries by accidents, or
 - Sudden attacks of illness or exacerbation of the disease
- These patients require immediate attention and treatment. Emergency patients receive resuscitation and life-saving treatment².

Emergency medical services (EMS) are an integral part of the hospital. The emergency department is frequently thought of as a microcosm of the hospital as a whole. It is also the "Front Door" of the hospital, the portal of entry that interacts with the highest volume of patients requiring critical care. The reputation of a hospital rests to a large extent on the service of emergency department. Emergency means serious, it needs quick attention and immediate action. Emergency department is primarily meant for immediate action. It is primarily meant for immediate medical attention and resuscitation of seriously ill patients. They should have priority over less seriously patients. Quick and competent care can save lives and also reduce suffering and duration of illness. Hence, emergency service must avoid delay in attending to manage the patients. Emergency health services are usually delivered by a general practitioner, ambulance personnel or by attendant at the place of the accident and Emergency department of a hospital. The objectives of the services are –

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- Provision of immediate relief and management of patients arriving at the hospital with acute medical and surgical emergencies.
- Managing accident victims, providing first-aid, treatment of minor injuries and referred to appropriate specialty or hospital, in case specialized care is necessary and cannot be provided in this hospital.
- Attending to all medico-legal formalities, including documentation of clinical condition and other particulars and intimation to and liaison with police.
- Attending to patients coming outside the routine outpatient working hours, and
 - i. Screening them for admission,
 - ii. Observing them for short period to determine whether they need admission, or
 - iii. Providing outpatient care.¹

Emergency department of hospitals is often the point of major public interest and is the most vulnerable to criticism. The reputation of a hospital rests to a very large extent on two important factors, i.e. the emergency and OPD. The sudden and unexpected nature of the emergency produces panic and psychological disturbance of relatives which must be appreciated and borne in mind in organization and management of services³.

The aim of the study was to assess the emergency service management in Dhaka Medical College and Hospital. This is the largest teaching hospital in public sector under the Ministry of Health & Family Welfare, Government of Bangladesh.

Materials and Methods

This descriptive type of cross sectional study was conducted in Dhaka Medical College and Hospital. Data were collected for a period of 7 days from the medical records of emergency department of DMCH. Then the tables were generated after proper checking, verifying and editing as per specific objective and key variables. Analysis of data was finally done in Statistical Package for Social Science (SPSS 17) program.

Results

From the table it was found that the highest percentage 39.5% of the patients was between 21-30 years of age group and about three quarters (75.3%) of the patients were male. The data of the present study showed that nearly half (44%) of the patients attended in the emergency due to RTA .

The findings of collected data have been described and presented in tables and figures. The figures and tabular forms are in the following pages.

Table-1: Distribution of the patients' attending in the emergency department according to their age.

Age (Years)	Frequency	Percentage
Up to 10	41	6.9
11-20	128	21.4
21-30	236	39.5
31-40	104	17.4
41-50	58	9.7
51-60	20	3.3
61 & Above	11	1.8
Total	598	100.00

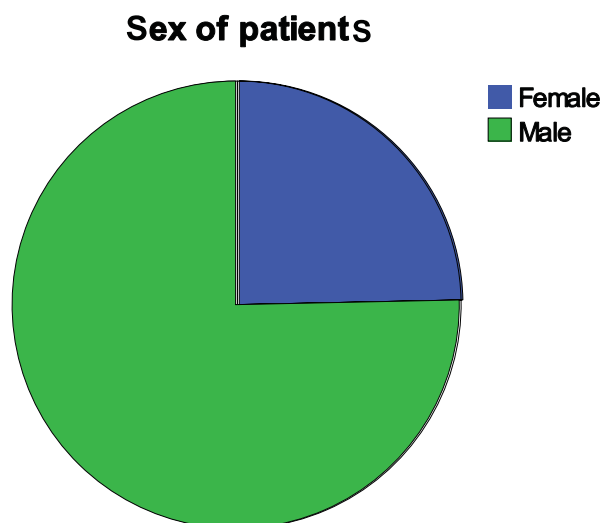
Table 1 summarizes the ages of the patients which were collected from the medical record of the emergency department. Among the 598 patients nearly 39.5% (236) were between 21-30 years of age, followed by 21.4% (128) between 11-20 years, 17.4% (104) between 31-40 years, 9.7% (58) between 41-50 years, 6.9% (41) was up to 10 years, 3.3% (20) between 51-60 years and the least one was 1.8% (11) which were 61 & above years of age.

Statistics of ages of the patients attending for emergency treatment

Parameters	Statistics
Mean	28.06
Median	26.00
Mode	30.00
Std. Deviation	13.01
Variance	169.22
Range	81
Minimum	1
Maximum	82

The mean age of the patients was 28.06 ± 13.01 years and the lowest and highest ages were 1 and 82 respectively.

Figure 1: Distribution of the patients according to their sex. [n = 598]



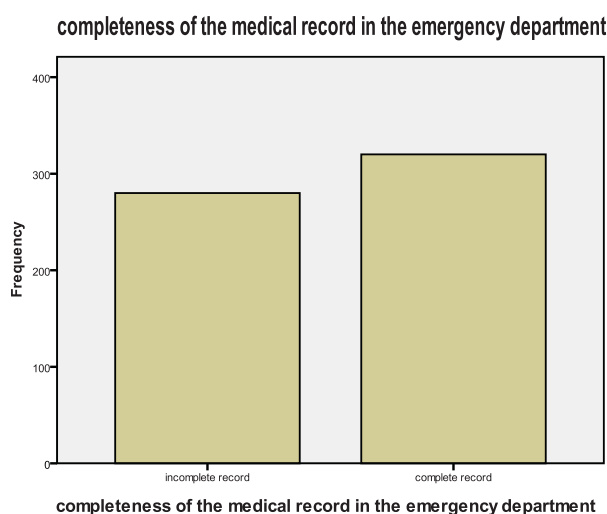
The figure-1 shows that majority of the patients 75.3% (450) was male and 24.7% (148) was female.

Table-2: Distribution of the patients according to their diagnosis [n = 580]

Code No.	Diagnosis of Patients	Frequency	Percentage
1	Physical assault	210	36.2
2	Injury due to Road Traffic Accident (RTA)	255	44.0
3	Injury of any kind except RTA	105	18.1
4	Injury caused by biting by human being	1	0.2
5	Injury caused by biting by other animals	5	0.9
6	Medical emergencies(HCR, COPD, Granuloma)	3	0.5
7	Brought dead	1	0.2
TOTAL		580	100.0

Table 2 shows that maximum cases of emergency 44% (255) were due to RTA, 36.2% (210) were due to physical assault, 18.1% (105) were injury for any kind except RTA 0.2% (1) for injury caused by biting by human being, 0.9% (5) for injury caused by biting by other animals, 0.5% (3) for medical emergencies (HCR, COPD, Granuloma) and 0.2% (1) was brought dead.

Figure 2: Distribution of the patients according to the completeness of the medical record.



Discussion

The medical records of emergency of DMCH were analyzed. The highest percentage 39.5% of the patients was between 21-30 years of age and about three quarters (75.3%) of the patients were male. The data of the present study showed that nearly half (44%) of the patients attended in the emergency due to RTA. DMCH is the largest teaching hospital in public sector in Bangladesh but the record shows that nearly 50% of the records of the patients at emergency of DMCH were incomplete.

However it was observed that the sanctioned post for the emergency medical officers is 15 but only 10 medical officers were posted and all the staff were not properly trained; that is no professional training was given to the medical staff in handling the emergency patients. So the experience of the professional staff (medical and nursing) is very limited.

The supporting staff for emergency was available but not adequate to run the emergency department smoothly. Security services were available but not sufficient for the medical staff as well as for the patients. The emergency services of DMCH did not provide ambulance services for transporting emergency patients. The resuscitation facilities and the observation facilities of emergency were present but inadequate for the patients.

All the necessary equipments for the management of all emergencies were available but not adequate and the equipment available is of poor quality. The supporting services were also inadequate.

Strength of Emergency Medical Services of DMCH:

1. Integrated emergency service to the ill and wounded people.
2. A lot of specialist manpower.
3. Twenty four hours emergency duties are available.
4. Any type of emergency patients can seek treatment at this hospital.
5. The most important strength of emergency is the presence of One stop Crisis Center

Weakness of Emergency Medical Services of DMCH:

1. Emergency ambulances are available but not functioning.
2. General cleanliness of the emergency department is not up to the mark. Often wound infection occurred as emergency ward is not well cleaned.
3. Improper documentation, esp. in medico legal cases.
4. Lack of courtesy of the medical staff.

Conclusions

In the light of data analysis and discussion it can be concluded that the management of emergency medical services were satisfactory but not up to the mark. However, the problems as revealed need to be critically examined by the management authority to remove barriers and to improve the services further.

References

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