

Original Article:

Management of the services of emergency department in a specialized hospital – a cross sectional study

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Abstract

Emergency department is one of the most important part of the hospital and also vulnerable to criticism. The reputation of a hospital rests to a large extent on the service of emergency department. A descriptive type of cross sectional study was conducted at Emergency Department (ED) of National Institute of Cardiovascular Diseases Hospital (NICVD), Dhaka to assess different aspects of the service management of ED which includes opinion regarding different services, reception facilities, overall management of ED, waiting time for the patients to be attended by a doctor, required time for completion of emergency treatment, suggestions of service receivers for further improvement of ED of the hospital. A total of 121 patients or patient attendance and 39 health personnel were interviewed by a structured questionnaire and a checklist was utilized for availability of equipment's and drugs in ED. The collected data were processed and analyzed meticulously with the help of SPSS (Version 21) software on the basis of different variables. According to Standard Operating Procedure (SOP) all instruments were present, 15 emergency drugs had been listed, out of them Inj. Streptokinase, antiseptic liquid were not available at that time in the ED of the hospital. The study revealed that out of 160 respondents the mean age was 40.3 ± 5.81 years, opinion about different services provided in ED more than two third found satisfied, only 18.1 % service receivers mentioned about the waiting time at ED to be seen by a doctor was ≥ 3 minutes, more than half (54.5 %) required 20-30 minutes for completion of emergency treatment, different suggestions were suggested for further improvement of ED like increase number of wheel chair, stretcher, ambulance, to supply required medicine from the hospital, separate ECG room for female patients, waiting room for patients attendance etc. However, specific problems identified by different stakeholders need to be critically appraised by the authority to improve the services further.

Key words: Emergency, Standard Operating Procedure.

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Introduction: Hospitals play an important role in the health care system that have an organized medical and other professional staff, inpatient facilities, deliver medical, nursing and related services 24 hours per day, 7 days per week. Hospitals offer a varying range of acute, convalescent and terminal care using diagnostic and curative

services in response to acute and chronic conditions arising from diseases as well as injuries and genetic anomalies^[1]. Emergency department (ED) play a vital role in a hospital that provide emergency services to the patient. ED are expected to provide care for any patient, at any time and under any reasonable circumstances. Emergency means sudden illness or injury requiring immediate physicians' attention to prevent the danger or delay in treatment to save the precious part or life with minimum disability or death. Emergency medical services are a type of emergency service dedicated to providing out-of-hospital acute medical care, transport to definitive care and other medical transport to patients with illnesses and injuries which prevent the patient from transporting themselves^[2]. Emergency medical services may also be locally known as a paramedic service, a first aid squad, emergency squad, rescue squad, ambulance service, ambulance corps or life squad. The goal of most emergency medical services is to either provide treatment to those in need of urgent medical care, with the goal of satisfactorily treating the presenting conditions, or arranging for timely removal of the patient to the next point of definitive care^[3].

The emergency medical service also encompasses the role of moving patients from one medical facility to an alternative one; usually to facilitate the provision of a higher level or more specialized field of care but also to transfer patients from a specialized facility to a local hospital or nursing home when they no longer require the services of that specialized hospital, such as following successful cardiac catheterization due to a heart attack^[4]. The aim of the study was to assess the different aspects of management of the services of ED in a specialized hospital (NICVD)

which includes opinion of service receivers regarding different services, reception facilities, overall management of ED, waiting time, required time for completion of emergency treatment, suggestions of service receivers for further improvement of ED of the hospital.

Materials and methods: The descriptive type of cross sectional study was conducted in the ED of National Institute of Cardiovascular Diseases (NICVD), that is a specialized hospital in Dhaka city during the period January to December 2014, with 160 sample population where 121 were patients or patient attendants and 39 were service providers such as doctors, nurses, supporting staffs who work in emergency department. Non-probability purposive sampling technique was used for data collection and data were collected through face to face interview administered questionnaire and check list. During data collection, opinion about different services provided in ED, the respondents were asked to give their opinion for excellent services as highly satisfied, good services as satisfied, average services as poorly satisfied and bad services as dissatisfied. After developing the questionnaire was pre tested for necessary modification and finalization.

Then the master tabulation sheet was prepared after proper checking, verifying and editing as per specific objectives and key variables. Analysis of data was finally done with Statistical Package for Social Science (SPSS) software (version 21) of computer on the basis of difference variables. Then the data presentation was perfectly done by MS Word and MS Excel. Prior permission was taken from the concerned authorities. Verbal consent was taken from the respondents. Confidentiality and anonymity of the respondents was maintained.

Result:**Table 1: Socio demographic characteristics of the respondents.**

Age group (in years)	Frequency	Percentage
Less than or equal to 35	37	23.1
36-45	41	25.6
46-54	49	30.6
Above 55	33	20.6
Total	160	100.0
Mean (± SD)	40.3 (±5.81) years	
Category of the respondents	Frequency	Percentage
Service providers (Doctor, Nurse, Supporting staff)	39	24.3
Patients or attendance of patients	121	75.6
Total	160	100.0

Table 1 revealed that the mean age of the respondents was 40.3 ± 5.81 years and the category of the respondents was 24.3 % service providers like doctor, nurse, supporting staff, 75.6 % patients or attendance of patients.

Table 2 : Distribution of the service receivers according to their opinion about different services.

Opinion about different services provided in ED	Highly satisfied	Satisfied	Poorly satisfied	Dissatisfied	Total
	n (%)	n (%)	n (%)	n (%)	n (%)
Opinion about reception facilities	19 (15.7)	96 (79.3)	6 (5.0)	-	121 (100.0)
Opinion regarding the service provided by the service providers	39 (32.2)	77 (63.6)	1 (.82)	4 (3.3)	121 (100.0)
Opinion regarding cleanliness of ED	2 (1.66)	94 (77.6)	-	25 (20.6)	121 (100.0)
Opinion about overall management of ED	7 (5.8)	107 (88.4)	4 (3.3)	3 (2.5)	121 (100.0)

Table 2 shows opinion about overall management of ED 88.4 % respondents were satisfied; Opinion about reception facilities, Opinion regarding cleanliness of ED and Opinion regarding the service provided by the service providers were found satisfied in 79.3 %, 77.6 % and 63.6 % respondents respectively. But it was found about cleanliness of ED 20.6 % were dissatisfied, where highly satisfied were 1.66 %. Opinion about overall management of the department was highly satisfied, poorly satisfied and dissatisfied in 5.8 %, 3.3 % and 2.5 % respondents respectively.

Table 3 : Distribution of the respondents (service receivers) according to their statement about supplied necessary medication from ED of the hospital

Necessary medication supplied from ED	Frequency	Percentage
All the items	10	8.2
More than half	14	11.5
Half	27	22.3
Less than half	39	32.2
None of the items	31	25.6
Total	121	100.0

Table 3 shows 32.2 % respondents mentioned less than half necessary medication were supplied from ED, 22.3 % mentioned about half, 11.5 % mentioned about more than half and 8.2 % mentioned all the items of necessary medication were supplied from ED; where as 25.6 % mentioned no medication was supplied from ED.

Table 4 : Distribution of the respondents (service receivers) according to their statement about waiting time at ED to be seen by a doctor.

Waiting time (in minutes)	Frequency	Percentage
≥ 3	22	18.1
4 – 5	36	29.7
6 – 10	44	36.3
More than 10	19	15.7
Total	121	100.0

Table 4 shows out of 121 respondents 36.3 % mentioned within 6-10 minutes time patients were seen by a doctor in ED, 29.7 %, 18.1 % , 15.7 % mentioned the waiting time was 4-5 minutes, ≥ 3 minutes and more than 10 minutes respectively.

Table 5 : Distribution of the respondents (service receivers) according to their statement about required time for the completion of emergency treatment.

Required time for completion of emergency treatment (in minutes)	Frequency	Percentage
Less than 20	16	13.2
20 – 30	66	54.5
More than 30	39	32.2
Total	121	100.0

Table 5 shows out of 121 respondents 54.5 % mentioned 20 – 30 minutes time required for the completion of emergency treatment, where as 32.2 %, 13.2 % respondents mentioned the required time was more than 30 minutes, less than 20 minutes respectively.

Figure 1 : Distribution of the respondents according to sex[n=160]

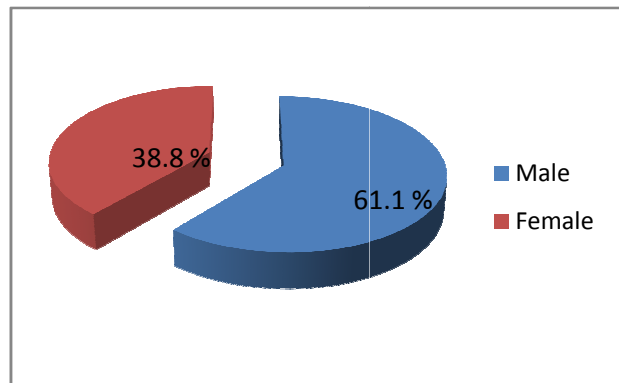


Figure 1 shows out of 160 respondents 61.1 % were male and 38.8 % were female.

Table 6: Distribution of the respondents (service receivers) according to their suggestions for further improvement of emergency department of the hospital.

Suggestions for further improvement of ED	Frequency	Percentage
Increase number of wheel chair, stretcher and ambulance	58	47.9
Separate ECG room for female patient	27	22.3
Waiting room for patients attendance	20	16.5
Increase number of toilet	12	9.9
Supply required medicine from the hospital	4	3.3
Total	121	100.0

Table 6 shows out of 121 respondents 47.9 % respondents suggested to increase number of wheel chair, stretcher and ambulance, 22.3 % suggested for separate ECG room for female patient and 16.5 % , 9.9 % , 3.3 % suggested for waiting room for patients attendance, to increase number of toilet, to supply required medicine from the hospital respectively.

Discussion:

Emergency department as well as the services rendered by the department is one of the most important part of the hospital and also vulnerable to criticism. The sudden and unexpected nature on the emergency produces panic and psychological disturbances to the relatives, which must be valued and borne in mind during organization and management of services^[5]. This study revealed that out of 160 respondents three fourth (75.6 %) were patients or attendance of patients, that means service receivers; 24.3 % were service providers (doctors, nurses, supporting staffs).The mean age was 40.3 ±5.81 years (Table 1); more than half of them (61.1 %)

were male and 38.8 % were female (Figure 1). About the opinion of different services provided in ED the hospital like opinion about reception facilities, opinion regarding the service provided by the service providers, opinion regarding cleanliness of ED, opinion about overall management of ED the study result revealed 79.3 %, 63.6 %, 77.6 % and 88.4 % respondents were satisfied respectively, where as opinion regarding cleanliness of ED 20.6 % respondents were dissatisfied and very little amount (2.5 %) of the respondents were dissatisfied about overall management of ED of the hospital (Table 2).According to Dr. Dharmendra Dodiya, 2013 in his study on “Management of emergency services and care of patients in corporate hospital of Ahmedabad” showed about overall management of ED 80% patients and relatives were highly satisfied, 19 % were satisfied and 1% were poorly satisfied, which was not consistent with our study findings. Though the amount of dissatisfaction on overall management of ED is very little but it is necessary to identify the causes of dissatisfaction and the authority should give special attention on the opinion regarding cleanliness of ED. IT was found one fourth (25.6 %) of the respondents mentioned no medication were supplied from ED in the hospital (Table 3). Waiting time at ED to be attended by a doctor is a very crucial factor. According to SOP for the management of emergency services in ED patients should be attended by a doctor immediately or the waiting time should not more than 5 minutes. But in this study it was found more than one fourth respondents (29.7 %) waited for 4-5 minutes, 36.3 % respondents waited for 6-10 minutes and 15.7 % waited for more than 10 minutes in ED of the hospital to be attended by a doctor (Table 4), which is a very important point to focus on. It is necessary to identify in case of waiting time why SOP

is not properly maintained; one of the cause may be overloaded patients in ED, others need to be identified and authority need to take action to lower the waiting time in ED. For completion of emergency treatment almost half (54.5 %) mentioned 20-30 minutes were required (Table 5). About suggestions for further improvement of ED of the hospital less than half (47.9 %) of the respondents suggested to increase number of wheel chair, stretcher, ambulance; less than one third (22.3 %) suggested for separate ECG room for female patients, other suggestions were provision of waiting room for patients attendance, increase number of toilet, to supply required medicine from the hospital. These recommendations for further improvement of ED were quite similar with the study conducted by Dr. Dharmendra Dodiya, 2013 except suggestion box outside the ED for immediate feedback from patients and their relatives that can help in improving the service level effectively. It is necessary to give proper attention by the authority on the suggestions of service receivers for further improvement of ED of the hospital.

From the findings of the check list the ED of the study hospital was well equipped. Most of the facilities were present in ED except waiting room, sufficient toilet facilities and availability of adequate number of bed. The other diagnostic facilities like X-ray, echocardiogram were not round o'clock available within the hospital. Drugs supply was also inadequate with the demand of the patients. According to Standard Operating Procedure (SOP) all instruments were present, 15 emergency drugs had been listed, out of them Inj. Streptokinase, antiseptic liquid were not available at that time in the ED of the study hospital.

Conclusion:

Based on the findings of the present study, it can be concluded that the ED of NICVD

was well equipped, almost all the requirements were fulfilled according to SOP, some suggestions were made by the service receivers to improve the services of ED of the hospital. It was noticed from the study that almost two third of the service receivers were satisfied on different services provided in ED of the hospital, which is appreciable; but still there was a percentage who were poorly satisfied or dissatisfied about different services of ED, which should be considered by the authority. However specific problems identified by different stakeholders need to be critically appraised by the authority to improve the services of ED further.

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