

Status of Management of Cardiac Emergency Services at Ibrahim Cardiac Hospital & Research Institute: Service Providers' Perspective

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ABSTRACT

This cross-sectional study was conducted on doctors, nurses and support staffs serving at the Emergency Department of Ibrahim Cardiac Hospital and Research Institute (ICHRI) to seek their opinion about the status of management services available at the Emergency Department (ED) of the Institute. Of the total respondents 20 were on duty physicians, 21 were on duty nurses and 18 were support staffs. Apart from the respondents, 34 check-lists were used by 3 (three) independent observers to monitor the daily ongoing activities of the Emergency Department during the period of data collection. This study analyzed the service providers' perspective about management of Emergency Department.

As doctors' opinion was sought, 45% of them expressed their satisfaction at the services delivered at ED and 40% were more or less satisfied. Very few were either highly satisfied (5%) or grossly dissatisfied (10%). As regard to work-load, thirty percent opined that ED was overloaded. However, majority believed that ED was adequately equipped (75%) to deal with cardiac emergencies which bear consistency with the views expressed by patients/clients. Forty percent held the view that support staffs were not adequate to run the Emergency Department smoothly.

The views expressed by the nurses shows that majority (62%) of them was satisfied working at ED and informed that they did not feel any problem in carrying out their assigned duties. They also were of the opinion that ED was adequately equipped but there was inadequacy of support staff (57.1%) keeping consistency with doctors' opinion. They, however, mentioned some other problems like inadequacy of nurses, porter and cleaners in every shift, security problem, lack of dress locker, dress changing room and dining space. Over 22% of the support staffs viewed ED as overloaded which correlates well with doctors' opinion. All other opinions were almost the same as those of doctors and nurses. One important issue they raised was the lack of rest room for them (22.2%). The findings of cardiac emergency services obtained through check-list were fairly comparable with the opinions expressed by the patients and service providers. However, the views expressed by the patients and service providers about wardboys/ayas did correlate with the data obtained through check-list and were inappreciably low (29.4%).

According to service providers the Emergency Department is well-studded to manage all the cardiac emergencies. However, specific problems identified by different stakeholders need to be critically appraised by the authority to improve the services further.

Introduction

Emergency Department of a hospital is always blamed with mismanagement of services resulting in death or disability of a patient. Although it is not absolutely true in all cases as highlighted, it is conceded that some unfortunate outcomes are the result of inefficient management of emergency services. Emergency department is one of the most important part of hospital in terms of public health interest and is also vulnerable to criticism. The reputation of a hospital rests to a large extent on the service of emergency department.

Emergency means serious condition that needs quick attention and immediate action. Emergency department is primarily meant for immediate medical attention and resuscitation of seriously ill patients. It should have priority over less serious patients. The emergency department provides first impression on patients, relatives and friends who accompanies the patients. Quick and competent care can save lives and reduce suffering¹.

In recent years a greater understanding of the pathophysiology of ischemic heart disease and the development of promising new treatments has led to an emphasis on early intervention within the first 6 hours of ischemic onset. Animal studies suggest that this 6-hour period is the longest interval of substantial blood flow reduction before maximal and irreversible damage occurs². Like any other developing countries, Bangladesh is also experiencing an increase in the incidence of ischemic heart diseases. To reduce death and disability from cardiac diseases, the policy of the government is to provide cardiac care at an affordable cost³. As a part of the endeavour, management of services to deal with cardiac emergencies is imperative.

Prompt service-delivery should be one of the aims of Emergency Department. All patients attending in the emergency department are to be registered after a quick and preliminary assessment of the severity and urgency of their ailment by the emergency medical officers on

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duty. Whether the patient is admitted, discharged or referred to any other hospital is also to be recorded routinely. But they should not get priority over the urgent attention to the acutely ill patients.⁴

Over the last decade the acute heart attack/failure attending at emergency department has increased beyond the manageable capacity of many hospitals/institutes resulting in unfavorable outcomes on the fate of the patients. Patients/attendants always complain of insufficient staff and facilities at ED as the cause of delay in seeing a patient. For proper management of emergency services, doctors, nurses and health personnels should be efficient, sincere and sympathetic to the patients and equipment for transportation and resuscitation should be adequate. The increasing demand for medical and health care services in the face of limited resources has brought to the need for careful planning and management which are considered essential if high standard of health and health care are to be achieved. Increasing the number of staff and extending the facilities may solve the problem; but it cannot be a cost-effective approach. Efficient management means maximum output at a reasonable cost. That purpose the present study was undertaken at the ICHRI in 2007 to seek opinion from the service providers (doctors, nurses and other support staff working in the ED of ICHRI) about the status of management of services available at the ED of the Institute.

Methods

This cross-sectional study was conducted on doctors, nurses and support staffs serving at the Emergency Department of Ibrahim Cardiac Hospital and Research Institute (ICHRI) to seek their opinion about the status of management services available at the Emergency Department (ED) of the Institute. Of the total respondents, 20 were on duty physicians, 21 were on duty nurses and 18 were support staffs. Apart from the respondents, 34 check-lists were used by 3 (three) independent observers to monitor the daily ongoing activities of the Emergency Department during the period of data collection. This study analyzed the service providers' perspective about management of Emergency Department.

The level of satisfaction of the service providers, used as an indicator of efficient management, was measured using Likert Scale Score As there were more than one question in assessing respondents' level of satisfaction, combined scores were used to measure their level of satisfaction. The level of satisfaction was measured on a 0-4 Likert Scale, where 0 means 'grossly dissatisfied' and 4 'highly satisfied' with 'partially satisfied' 1, 'more or

less satisfied' 2, and 'satisfied' 3 in between them. First the level of satisfaction was assessed at every point of service delivery. Then all these scores were added together to ascertain the overall level of satisfaction. Data were analysed using computer software SPSS (Statistical Package for Social Sciences) version 11.5. The test statistics used to analyse the data were descriptive statistics.

Results

The data obtained from doctors' opinion about the management of cardiac emergency services are documented below.

Particulars of the doctors participated as respondents: Out of 20 on-duty doctors, 12(60%) were below 30 years of age and rest (40%) were 30 or above 30 years of age. The mean age was 29 ± 2.15 years and the lowest and highest ages of the doctors was 19 and 40 years respectively. A male preponderance was observed among the selected doctors (80%) giving a male to female ratio of 4:1. Service experience of the doctors revealed that 85% of the doctors had 1-5 years of working experience. One doctor (5%) had less than 1 year and 2 doctors (10%) had more than 5 years experience. The mean service experience was 2.88 ± 3.11 years (Table I).

Table I. Distribution of doctors by general characteristics (n = 20).

General Characteristics	Frequency	Percentage
Age*		
< 30	12	60
30	08	20
Sex		
Male	16	80
Female	04	20
Service experience**		
< 1	01	5.0
1-5	17	85.0
> 5	02	10.0

* Mean age = (29.0 ± 2.15) years; range = 19 - 40 years.

** Mean service experience = (2.88 ± 3.11) years.

Doctors' opinion about ED management: Table II shows the doctors' opinion about Emergency Department management. Investigating about the feeling of working at ED, 45% of the doctors expressed that they were satisfied and 40% were more or less satisfied. Few were either highly satisfied (5%) or grossly dissatisfied (10%). In response to a question whether ED was overloaded, 30% of the doctors thought so. Majority of the doctors believed that ED was adequately equipped (75%), emergency investigations done in the hospital

(90%) and all emergency medicines to deal with cardiac emergencies were available in the hospital. However, 40% opined that support staffs were not adequate to run the Emergency Department smoothly.

Table II. Doctors opinion about management of ED.

Doctors opinion	Frequency	Percentage
Feeling working at ED		
Grossly dissatisfied	02	10.0
More or less satisfied	08	40.0
Satisfied	09	45.0
Highly satisfied	01	5.0
ED overloaded	06	30.0
Patients'/Attendants' attitude		
Cooperative	16	80.0
Non-cooperative	03	15.0
Aggressive	01	5.0
Adequately equipped	15	75.0
Support staff adequate	08	40.4
Emergency investigations done	18	90.0
All medicine supplied	16	80.0

Particulars of the nurses: Approximately 62% of the nurses were above 25 years old and the rest were 25 or below 25 years of age. The mean age was 25.57 ± 2.6 years and the lowest and highest ages were 20 and 30 years respectively. Female nurses were much more than the male nurses with male to female ratio being 1:4. Over 70% had < 5 years of service experience, while the rest had 5 or over 5 years of experience (Table III).

Table III. Demographic and other particulars of the nurses.

General characteristics	Frequency	Percentage
Age		
≤ 25	08	38.1
> 25	13	61.9
Sex		
Male	04	19.0
Female	17	81.0
Service experience (yrs)		
< 5	15	21.0
≥ 5	06	29.0

* Mean age = (25.57 ± 2.60) years; range = (20 - 30) years.

Nurses' perspective about ED management: Asked about how they felt working at ED, about 62% of the nurses expressed that they were satisfied, 14.3% were highly satisfied and 23.8% more or less satisfied. They informed that more than 80% of the patients attending at emergency were cooperative and 61.9% told that they did not feel any problem in carrying out their jobs. Majority (81%) of the nurses held the opinion that ED was

adequately equipped but there was inadequacy of support staff (57.1%). They, however, told about some other problems that need to be addressed (Table IV).

Table IV. Nurses' opinion about emergency service management.

Nurses' opinion	Frequency	Percentage
Feeling about working at ED		
More or less satisfied	05	23.8
Satisfied	13	61.3
Highly satisfied	03	14.3
Patients'/Attendants' attitude		
Cooperative	17	81.0
Non-cooperative	03	14.3
Aggressive	01	4.8
Feeling problem in performing work		
Adequately equipped	17	81.0
Support staff adequate	12	57.1
Inadequate number of nurses	01	4.8
Scarcity of porter in every shift	01	4.8
Scarcity of cleaning workers in every shift	01	4.8
Security problem	01	4.8
Dress locker needed	01	4.8
Dress changing room needed	01	4.8
Dining space needed	01	4.8

General characteristics of support staffs: Of the 18 support staffs interviewed, 3(16.7%) were cardiac ambulance driver, 1(5.6%) was ambulance driver, 3(16.7%) ambulance paramedics, 8(44.3%) and wardboys/ayas and 3(16.7%) supervisory staffs. Demographic characteristics of the support staffs shows that out of 18 support staffs, 22.2% of the staffs were below 25 years of age, 27.8% from 25 - 30 years, 22.2% from 30-35 years, 5.6% 35 - 40 years and the rest 22.2% 40 or above 40 years of age. The average age was 32.33 ± 9.67 years and the lowest and highest ages ranged from 23-51 years (Table V).

Table V. Distribution of support staffs by general characteristics (n = 18).

General characteristics	Frequency	Percentage
Age* (years)		
< 25	04	22.2
25-30	05	27.8
30-35	04	22.2
35-40	01	5.6
≥ 40	04	22.2
Sex		
Male	13.5	72.2
Female	05	27.8

* Mean age = (32.33 ± 9.67) years; range = (23 - 51)

Support staffs' opinion about ED management: Half of the support staffs were more or less satisfied working at ED, 22.2% were satisfied, 5.6% were highly satisfied and 22.2% were poorly satisfied. Four staffs (22.2%) viewed ED as overloaded. Nearly 80% of support staffs told that the patients and their attendants were cooperative and they did not feel any problem in their work (44.3%). Two-third (66.7%) of the staffs expressed that ED was adequately equipped and 61% held the view that support staffs were adequate. Of the other issues they raised, the most urgent one was rest room needed for support staffs (22.2%) (Table VI).

Table VI. Support staffs' opinion about Emergency Department management.

Support staffs' opinion	Frequency	Percentage
Feeling about working at ED		
Poorly satisfied	04	22.2
More or less satisfied	09	50.0
Satisfied	04	22.2
Highly satisfied	01	5.6
ED overloaded	04	22.2
Patients'/Attendants' attitude		
Cooperative	14	77.8
Non-cooperative	03	16.7
Aggressive	01	5.6
Feeling any problem in performing work	08	44.3
Adequately equipped	12	66.7
Support staff adequate	11	61.1
Less doctor	01	5.6
Inadequate number of nurses	01	5.6
Scarcity of porter in every shift	01	5.6
Rest room needed	04	22.2

Table VII. Status of cardiac emergency services by observation (n = 34).

Management facilities of ED	Frequency	Percentage
Sign-post found	30	88.2
Reception facility adequate	27	79.4
Condition of waiting room good	20	58.8
On duty doctor available	32	94.1
On duty nurse available	32	94.1
On duty medical assistant/pharmacist found	17	50.0
On duty ward boy/Aya found	10	29.4
On duty sweeper found	25	73.5
Cleanliness		
Dirty	04	11.8
Uncertain	11	32.4
Clean	16	47.1
Very clean	03	8.8
Toilet		
Very dirty	01	2.9
Dirty	11	32.4
Uncertain	20	58.8
Clean	02	5.9

Observation by check-list: The findings of cardiac emergency services obtained through check-list are presented in table VII. Adequacy of reception facility, condition of waiting room, availability of doctors and nurses all were appreciable keeping consistency with the opinions expressed by the patients and service providers. However, the view expressed by the patients and service providers about wardboys/ayas did match with the data obtained through check-list and was inappreciably low (29.4%) (Table VII).

Discussion

As doctors' opinion was sought, 45% of the doctors expressed that they were satisfied and 40% were more or less satisfied. Few were either highly satisfied (5%) or grossly dissatisfied (10%). Thirty percent opined that ED was overloaded. However, majority believed that ED was adequately equipped (75%) to deal with cardiac emergencies keeping consistency with the views expressed by patients/clients. Forty percent held the view that support staffs were not adequate to run the Emergency Department smoothly.

The views expressed by the nurses showed that majority (62%) of them was satisfied working at ED and informed the investigators of the present study that they did not feel any problem in carrying out their assigned duties. They also were of the opinion that ED was adequately equipped but there was inadequacy of support staff (57.1%) keeping consistency with doctors' opinion. They, however, mentioned some other problems like inadequacy of nurses, scarcity of porters, cleaners in every shift, security problem, lack of dress locker, lack of dress changing room and lack of dining space. Although a minority of them cited these issues, the issues cannot be overlooked in the light of efficient management of emergency services. Over 22% of the support staffs viewed ED as overloaded which correlates well with doctors' opinion. All other opinions were almost the same as those of the doctors and nurses.

The findings of cardiac emergency services obtained through check-list by 3 independent observers were fairly comparable keeping consistency with the opinions expressed by the patients and service providers. However, the view expressed by the patients and service providers about wardboys/ayas did correlate with the data obtained through check-list and was inappreciably low (29.4%).

Although patients' perspective was not the subject of discussion of this study, we would like to highlight one point which is closely related to management of ED. The encouraging side of the management of cardiac emergency services was that more than 65% of the patients were taken to the emergency room, either on a wheel-chair or on a stretcher from where the patient-

carrying vehicle stops. The disappointing finding was that about one-third of the patients (31.5%) were taken to the emergency room by walking which might exert extra burden to an already ailing heart and deteriorate patients' conditions further. This might be due non-availability of stretchers or wheel-chairs or there may be absence of porters at the moment when the carrying-vehicle stopped at the main gate of Emergency.

The study concluded that service providers of the ICHRI are of the opinion that management of cardiac emergency services are satisfactory. However, specific problems as revealed by the different stakeholders need to be critically appraised by the management authority to improve the services further. ICHRI, since its launching in 2004 is facing the challenge of rapidly increasing number of patients. According to service providers the

Emergency Department is well equipped to manage all the cardiac emergencies. But to equip the hospital with modern innovations of biomedical science is not the panacea. Rather how the services of these sophisticated equipments can be made easily accessible to most of its clients should be our main concern.

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