

# Prior Events of Emergency Hospitalization in a Tertiary Care Hospital of Bangladesh

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## Abstract

Seeking delayed emergency care facilities during life-threatening complications is a significant determinant of high mortality rate in developing countries. It was aimed to look into the antecedent events before emergency hospital admission in an adult medicine ward. The hospital based observational study was conducted at adult inpatient department of medicine of Dhaka Medical College Hospital from March 2012 to August 2012. All adult patients admitted in Dhaka Medical College Hospital who died within 48 hours after admission were included in the study. The study revealed that the patients who seeking the emergency care from residence their main transport system was Van (31%) and from another Hospital main transport system was Bus (27%). 66% of the patients were admitted within the 48 hours of appearing of the symptoms. Majority of the patients (64%) had consulted by MBBS doctor before admission. Early admission and prompt treatment can reduce the mortality as well as subsequent morbidity. Timely access to health care facilities can ensure the issue and improve the quality of care as well as quality of life.

**Keywords:** prior events, emergency care, medicine department, tertiary hospital, Bangladesh

## 1. Introduction

Bangladesh is one of the most densely and rapidly developing countries, where majority of the population in Bangladesh lives below the poverty threshold and when they facing critical health problem poverty will limit their access of minimum care by whom they lost their wealth and health [1-4]. It is believed that the pattern of medical diseases in developing countries is much different than the developed countries. The decision to admit the patients in medical ward is determined by many factors like age, co-existing illness, physical laboratory findings, the ability of oral intake of drugs and the resources available to the patients outside hospital [5, 6]. Choice of hospital care varies upon the distance of facility, cost involved and quality of life care provide. Sometimes health care receive not only depends on the socioeconomic factors and gender but some study shows it is not the major cause, where barrier depends on benefit of service outweighs the cost sometimes cost is the major fact [7]. Most of the time patients suffer more because of improper referral, when a hospital cannot handle any

serious case, either because it has no facilities to serve for the medical care needs of the patient or in case of a more chronic illness or complications where skilled nursing facilities are demanded or required [8, 9]. There are many obstacles to receive emergency care such as cost, availability of situation demanded services, timely coordination and support, direct user fees, non-medical costs, such as transportation and accommodation, barrier to access of emergency care, along with geographical distance, lack of knowledge and cultural barriers [10, 11]. Services delivery is also a challenge for the developing countries where infectious and non-communicable diseases both are causing health burden. A survey in low-income countries showed there were significant deficiencies in the case management and suggested specific areas in need of improvement included triage, emergency care, assessment, inpatient treatment and monitoring [12]. However the developing countries like Bangladesh are still struggling with the double burden of disease (the combination of communicable and non-communicable diseases). Due to lack of awareness of sanitation, lack of good water supply and

environment infectious diseases are still the major issues .Infectious diseases and non-communicable disease with complication are common cause of hospital admission in developing countries [8]. It was aimed to look into the antecedent events before emergency hospital admission in an adult medicine ward so that factors can be identified and necessary steps can be addressed to reduce mortality and morbidity.

## 2. Methods and Materials

The hospital based observational study was conducted at adult inpatient department of medicine of Dhaka Medical College Hospital from March 2012 to August 2012. All adult (>18 years) patients admitted in Dhaka Medical College Hospital who died within 48 hours after admission were included in the study and total 100 patients were included. The cases were offered with informed written consent process by the designated Research Assistant (RA)/co-investigators in the printed case record form (CRF). Each attendant was informed about the aims, methods, and anticipated benefits and of the study.

Informed written consent was ensured. The attendant had liberty to abstain from participation in the study or free to withdraw from the study. The CRF was filled out at hospital. Data was entered, cleaned and analyzed using statistical methods (SPSS).

Ethical clearance was obtained from the ethical review committee of Dhaka Medical College Hospital. Prior to study enrollment, written informed consent was obtained from each participating patient in conformity with the revised declaration of Helsinki. After giving all this information, verbal informed consent was obtained from the patient/guardian by signature.

## 3. Results and Discussion

Among the respondents 59% were female 99% were married, 60% were housewife, 20% patient ages were below or equal to 40 years, 30% patient were between the 41 to 60 years and 50% patient were more than 61 years. Among the respondents 31% patients were transported by van, 29% use Compressed Natural Gas (CNG), 23% use bus and other 17% use various transport such as car, boat, lunch and rickshaw from their residence. From the another hospital, the 27% patient use bus as major and 14% use other vehicle such as car, boat, lunch, rickshaw, CNG etc (Table 1). Among the patients 66% were admitted within 48 hours of getting symptom(s) or complication(s) and rest of 34% had

admitted after 48 hours of getting symptom(s) of complication(s) (Figure 1).

Before admitting in the hospital 64% patients had consulted by Medical Graduates (MBBS doctors), 24% patient had consulted by village doctor, 10% had taken medication from local pharmacy and rest of 2% patient had consulted with post graduate doctors (Figure 2).

Table 1: Distribution of Transports used by the patients (n=100)

Used Transport Vehicles	Percentage (%)
<b>From Residence</b>	
Van	31.0
CNG driven auto rickshaw	29.0
Bus	23.0
Others(Car, Boat, Lunch, rickshaw)	17.0
<b>From another Hospital</b>	
Bus	27.0
Others(Car, Boat, Lunch, rickshaw, CNG)	14.0

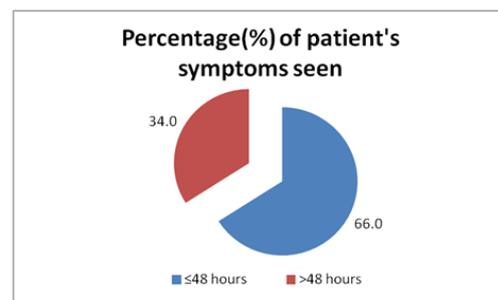


Figure 1: Symptoms seen before admission of patient

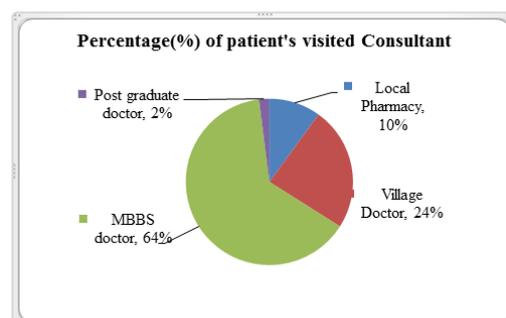


Figure 2: Level of medical or non-medical consultation sought before admission of patient (n=100)

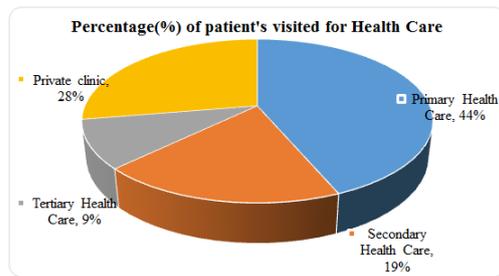


Figure 3: Level of health Care visited before admission at hospital in the respondents (n=100)

Among the admitted patients large percentage (41%) visited primary health care, 26% patient visited private clinic, 18% patient visited secondary health care and only 9% patient visited tertiary health care before getting admission (Figure 3).

It was aimed to look into the prior events of emergency hospitalization in tertiary care hospital in Dhaka city as early intervention in emergencies can reduce the mortality. Moreover, the referral system is very poor and people of Bangladesh have poor tendencies to visit physicians as first contact and there also other abnormal health seeking behavior [2, 13]. This study showed that in emergency the used transports were Van (Special human pulled 3 wheeled vehicle), CNG driven auto rickshaw, Bus from residence to hospital and in cases of transport from hospital to hospital bus was mostly used (Table 1). These transports are common and mostly used in Bangladesh as a developing country [2, 3]. But, surprisingly Van is relatively slow transporter than any others but can afford the patients in lying postures. This can be the cause of using Van in an emergency. Moreover, expense for transport is an important factor for the patients attending at the study place and previous study revealed financial constraints is an important indicator for not taking the health services [14]. In this study when symptoms or complication arise (66%) admitted within 48 hours and (34%) admitted after 48 hours (Figure 1) In our study also shown that 64% patient had consulted by Medical Graduates (MBBS doctor), 24% patient had consulted by village doctor, 10% had taken medication from local pharmacy and rest of 2% patient had consulted with post graduate doctor (Figure 2) where another study shows that largest of care sought from MBBS physicians (52.7%) and 35.8% had consulted by village doctor [14]. In our study shows before getting admission among (41%) the large percentage of patient visited primary health care, 26% patient visited private clinic, 18% patient visited secondary health care and only 9% patient visited tertiary health care (Figure 3). Urgent & appropriate referral system according to

priority basis can reduce mortality which is well established in western worlds [15].

#### 4. Conclusion

Episodes of illness and ill health may result in substantial medical expenses and trigger impoverishment of households. In the case of emergency care for fruitful and potential clinical outcome need to provide ongoing education for patients, providers, and the community; and to serve as a foundation for cost-effective care. A proper quality care and proper emergency management can reduce morbidity and mortality on a national level.

#### Conflict of Interest: None

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