

# Demography and Diagnosis of Patients Received Emergency Medical Service from Two Private Psychiatric Hospital in Dhaka City

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## Abstract

Emergency Medical Service (EMS) is an important option in health care delivery system which can reduce morbidity and mortality. Though emergency medical service (EMS) service available for physical illness, still absent for mental illness in government sector. Bangladesh is one of the developing countries in Asia which just transformed from low income status to lower middle income. The prevalence of psychiatric disorders in adult is 6.5 to 31% but the government expenses 0.06% of the total budget in mental health sector and the mental health act is yet to be approved. This cross sectional study intended to observe the demography and distribution of diagnosis of patients of two private hospitals who were hospitalized involuntarily via EMS. Two psychiatric hospitals were selected purposively and reviewed the EMS request forms and hospital discharge certificates of the respective patients. Among the patients, the common diagnoses were Schizophrenia (34.7%), Substance Related Disorders (18.8%), Bipolar Disorders (15.8%) and Personality Disorders (12.9%). Very few patients were admitted from rural background. There is lack of integrated national EMS system and some private initiatives provided for medical and psychiatric patients. It is an urgent need of further research in this field to identify limits and strength of the emergency medical service system as well as the integration and expansion of the service in government and private hospitals can be an effective option for addressing the mental health emergencies across the areas.

**Keywords:** EMS; Private hospitals; Bangladesh; Dhaka city; Schizophrenia; Substance related disorders; Personality disorders

## Introduction

Bangladesh is a country of about 160 million people, achieved health related Millennium Development Goals (MDG) significantly and the literacy rate is 61.0% among 15 years and above age group [1,2]. In a systemic review, the prevalence of mental disorders in Bangladesh is varied from 6.5 to 31.0% among adults and from 13.4 to 22.9% among children [3]. The amount of money spent for mental health services by the government health department is less than 0.5% of health care expenditures by the government [4]. Existing psychiatric service includes: Outpatient facilities, Community based inpatient units, Hospitals and Forensic facilities [4]. Globally very limited data relevant to emergency medical service (EMS) service for psychiatric patients. Even there is scarcity of data in Asia noticing the important service option for the severe mentally ill patients. Though EMS is available for physical illness, it's really surprising that, no emergency medical service provided by government for the mentally ill patients. The patient's caregivers do not have choice rather seek help from private sector to avail such facility in urban set up only. There are very few private psychiatric hospitals in Bangladesh providing EMS for the patients to shift them involuntarily to the hospitals and there is limited evidences regarding demography and disease pattern among the patients availed such facility in past. With this view researchers objected to see the pattern of demographical and diagnostic distribution of the patients who was admitted in the hospital via EMS system.

## Methods

The cross sectional study was conducted from July 2015 to June 2016 in two private psychiatric hospitals. Prior selecting the study place, researchers short listed the private psychiatric hospitals in Dhaka city having emergency medical service (EMS). From the hospitals list, two were selected purposively on the basis of location, availability of hospital records and authorities' positive attitude to disclose the patients

documents for the study. Researchers initially informed the objective, methods and implication of the study to the hospital authorities. After informed consent, researcher collected the relevant documents of patients from the patient document section of hospitals. The documents consist: 1) EMS request forms and 2) discharge notes. The documents collected from the authority were 12 months' time frame. The EMS request form contains the patient's demographic and relevant information (name, age, sex, education, occupation, marital status, address, description about the EMS service, signature of patient's care giver). The discharge notes consist of patient's diagnosis, case summary, investigation findings, and medications and follow up note. Reviewing the documents, authors compiled the data and analyzed by SPSS 16.

## Results

Total 101 patients were hospitalized in these two hospitals with the help of EMS. Among those, 71 (70.3%) was male, 97 (96%) reside in city (urban area), 53 (52.5%) were married. Most of the patients include in 2<sup>nd</sup> to 4<sup>th</sup> decade of age range (81.2%) and rests are beyond that age. Though all patients found educated up to various level, 55.5% didn't able to complete their graduation or post-graduation (Table 1). Among the patients there was also heterogeneity of occupation and

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prior illness among them 46(45.5%) was in service, 20 (19.8%) was students, 14 (13.9%) house maker and rest were unemployed (Table 1). It revealed that schizophrenia was 35 (34.7%), Substance Related Disorders 19 (18.8%), Bipolar Mood Disorders 16 (15.8 %), Personality disorders 13 (12.9%), Substance Related Disorders with co-occurring Personality Disorders 9 (8.9%) and others 8.9% (Table 2).

## Discussion

At its earliest developmental stage, an EMS system was a system of emergency care that functions to reduce death and disability usually resulting from two epidemics: trauma and cardiac arrest. The Institute of Medicine defined quality of EMS as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” and described six dimensions of quality care: a care that is safe, effective, patient centered, timely, efficient, and equitable [5]. Emergency medical services (EMS) providers deal with the care for patients in dynamic and challenging environments; pre hospital emergency care is a field that represents an area of high risk for errors and harm [6]. In USA, Emergency medical services (EMS) providers respond to thousands of 9-1-1 calls each day, caring for patients in challenging, unpredictable and potentially dangerous environments night and day [6]. There is variation of service according to geographical location of the country belongs. Asia-Pacific countries have unique EMS systems, which are very different from the Franco-German or Anglo-American models [7]. There is little evidence-based research to inform systems design for emergency care. In recent years, many Asian countries have begun to recognize the importance of emergency medicine and optimal EMS systems for improving the health status of their population. It’s really surprising that though there is limited research on traditional EMS for physical illness, there is scarcity of data relevant to EMS for mentally ill patients.

Characteristics	Frequency	Percentage
<b>GENDER</b>		
Male	71	70.3
Female	30	29.7
<b>AGE</b>		
10-40	81	81.2
>40	19	18.8
<b>RESIDENCE</b>		
Urban	97	96
Rural	4	4
<b>EDUCATION</b>		
Primary to Higher secondary	56	55.5
Graduation or post-graduation	44	44.5
<b>MARRITAL STATUS</b>		
Married	53	52.5
Unmarried	43	42.6
Widow/Widower	2	2
Divorced	2	2
Others	1	1
<b>OCCUPATION</b>		
Service holder	26	25.7
Student	21	20.8
Unemployed	20	19.8
Business	16	15.8
Housewife	14	13.9
Professional	04	4.0

Table 1: Distribution of demographic variables of the patients (n=101).

Diagnosis	Frequency	Percentage
Schizophrenia	35	34.7
Bipolar Disorders	16	15.8
Major Depressive Disorders	1	1.0
Substance Related Disorders	19	18.8
Personality Disorders	13	12.9
Substance Related Disorders and Personality Disorders	9	8.9
Major Depressive Disorder and Personality Disorders	1	1.0
Obsessive Compulsive Disorders	2	2.0
Delusional Disorder	1	1.0
Oppositional Defiant Disorder	3	3.0
Delirium	1	1.0

Table 2: Distribution of psychiatric disorders among the emergency services receivers (n=101).

At present in Bangladesh, there is no national integrated system of EMS for the citizens except few private initiatives which are limited for affluent class. Here EMS for patients suffering mental disorders is provided by very few private psychiatry hospitals individually. The service available only when family members demand it formally by written request form for the non-cooperative persons who are behaving abnormally against social norms and they think he or she needs psychiatric evaluation as well as management or who are previously diagnosed psychiatric patients. The EMS team consists of a physician, nursing staff, supporting staff, a driver and an ambulance. Though the team members experienced with this service, but none of them formally trained to deal with violent or difficult mentally ill patients except physician. The ambulance of the service is well equipped to combat any sort of medical emergency during transportation. It also keeps the psychotropic and other medications for rapid tranquilization of the violent patients.

The review results clearly indicates that majority of the patients are male 71 (70.3%) and it gives clue that female counterpart still not getting proper attention to be treated accordingly. It exposes the male predominant discriminative attitude in the society which still exists in this part of world. Very few patients were from rural background which proves the lack of awareness and availability of the service. The diseases indiscriminately occurred among various occupations and literacy status and affected a good number of functioning populations. Among the adult patients most of them are suffering from Schizophrenia 35 (34.7%), Personality Disorders 13 (12.9%) and Substance Related Disorders 19 (18.8%). It also proves that personality disorders are really unnoticed area that needed great attention by the clinicians. The review also shows that the two extreme age group that is children and geriatric age group also require emergency medical service.

## Conclusion

This is the first step to explore the existing EMS service for mentally ill patients in Bangladesh which indicates along with psychotic patients, Personality Disorder is another entity in that can consume emergency resources. Further large scale multicenter study would help to appraise existing situation in emergency medical service for psychiatric illness as well as to generalize as well as utilize the study result in policy making.

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## References

1. Arafat SMY (2016) Doctor patient relationship: An untouched issue in Bangladesh. *Int J Psychiatry* 1: 2.
2. Andalib A, Arafat SMY (2016) Practicing pattern of physicians in Bangladesh. *Int J Perceptions Public Heal* 1: 13-20.
3. Hossain M, Ahmed H, Chowdhury W, Niessen L, Alam D (2014) Mental disorders in Bangladesh: A systematic review. *BMC Psychiatry* 14: 216.
4. WHO, MOHFW (2007) WHO-AIMS report on mental health system in Bangladesh: A report of the assessment of the mental health system in Bangladesh. WHO, Bangladesh.
5. El Sayed MJ (2012) Measuring quality in emergency medical services: A review of clinical performance indicators. *Emerg Med Int* 2012: 161630.
6. Bigam BL, Buick JE, Brooks SC, Morrison M, Shojania KG, et al. (2012) Patient safety in emergency medical services: A systematic review of the literature. *Prehospital Emerg Care* 16: 20-35.
7. Ong ME, Cho J, Ma MHM, Tanaka H, Nishiuchi T, et al. (2013) Comparison of emergency medical services systems in the pan-Asian resuscitation outcomes study countries: Report from a literature review and survey. *Emerg Med Australas* 25: 55-63.