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# A Managerial View of Hospital Accident and Emergency Department - A Critical Unit of Health Care Services

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## ABSTRACT

*The Hospital Accident and Emergency Department provides round the-clock, immediate diagnosis and treatment for illness of an urgent nature and injuries from accidents to patients. Simple cases after being administered preliminary clinical treatment are discharged with instructions to attend OPD (Out Patient Department) as a follow-up measure. Cases of serious nature are admitted in emergency wards to provide immediate clinical medical care. Such patients are either discharged after 2-3 days or are transferred to permanent inpatient units. Emergency services are acquiring increasing importance due to modern problems arising out of urbanization and mechanization of the society. A managerial approach is needed to organize and manage Emergency Medical Services (EMS) in a hospital.*

## INTRODUCTION

The *Hospital Accident and Emergency Department* is a very *critical and sensitive unit* of any hospital and is involved in the management of emergency cases. Medical Emergency is a situation in which the patient requires urgent and high quality medical care. The emergency service brings about an interface between the hospital and the community, which is emotionally subcharged. This department provides the *first impression* on the patient, relatives and friends who come along with the patient. The first impression

should be positive one. Quick and competent clinical care rendered, can save lives and also reduce the severity and duration of illness. Emergency Medical Services (EMS) is an important aspect of acute medical care provided by a hospital equipped to deliver clinical services. It is an essential element in the contribution of the hospital towards the *total health care* of the community. The emergency medical services serve the community during any time of need *365 days, 12 months and 24 hours*.

Excellent Emergency Medical Services (EMS) must be provided to the patients in the Emergency Wards as the patients and their relatives are under emotional strain and subcharged with suspense and anxiety about the consequences of the disease or calamity that has come up suddenly. An empathetic approach would alleviate a large part of sufferings born out of fear and suspicion of the unknown.<sup>4</sup>

*A managerial approach* is essential for efficient and effective organization and management of Emergency Medical Services in a health care delivery organization.

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

- Injuries by accidents, or
- Sudden attacks of illness or exacerbation of disease.

These patients require immediate attention and treatment. Emergency patients receive *resuscitation* and *life saving treatment*. The treatment provided must be immediate and appropriate. If the patient is serious it can make all the difference between life and death.

The Emergency Department is also referred as casualty wing, for emergency cases as such it should have a distinct entry independent of OPD (Out Patient Department) main entry so that a very minimum time is lost in giving immediate treatment to casualties arriving in the hospital.

### OBJECTIVES AND SCOPE OF SERVICES

The objectives and scope of *Hospital Accident and Emergency Department* are enumerated below:

- Provision of immediate relief to and management of the patients arriving at the hospital with acute medical and surgical emergencies for example:
  - Acute Myocardial Infarction
  - Shock
  - Status Asthmatics
  - Acute Abdomen
  - Cardiac Arrest
  - Cardiac Failure
  - Ischemic Heart Disease
  - Strokes Adams Syndrome
  - Hypertensive Crisis
  - Pulmonary Embolism
  - Hemoptysis
  - Bronchial Asthma
  - Respiratory Failure
  - Tension Pneumothorax
  - Hematemesis
  - Acute Gastroenteritis
  - Acute Pancreatitis
  - Hepatic Coma
  - Coma
  - Meningitis

- Cerebrovascular Diseases
- Subarachnoid Hemorrhage
- Epilepsy
- Dehydration
- Cerebral Malaria
- Anaphylactic Shock

- Managing accident victims, providing first aid, treatment of minor injuries and referred to appropriate speciality or hospital, in case specialised care is necessary and cannot be provided in the hospital.
- Attending all medico-legal formalities, including documentation of clinical conditions and other particulars and initiation to and liaison with the police.
- Attending the patients coming outside the routine outpatient working hours, and screening them for admission.
- Observing them for short period to determine whether they need admission, or
- Providing outpatient care.

### SUBSIDIARY FUNCTIONS

In addition to providing emergency services, the unit also carries out the following subsidiary functions:

- Collection of casualties from the site of accident, disaster etc.
- Liaison with the police in medico-legal cases
- To organize a reception centre in case of disaster
- Education, training and research activities

### CATEGORIES OF GENERAL HOSPITALS

- Category A – 25 to 50 beds
- Category B – 51 to 100 beds
- Category C – 101 to 300 beds
- Category D – 301 to 500 beds
- Category E – 501 to 750 beds<sup>2</sup>

In hospitals of category **C**, **D** and **E**, *Hospital Accident and Emergency Department* should be an independent department working round the clock like a small hospital. In hospitals of category **A** and **B** it should again be independent but may be scheduled to function outside working hours of other clinics in OPD (Out Patient Department).

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## STAGES THROUGH WHICH THE PATIENT MAY PASS IN HOSPITAL ACCIDENT AND EMERGENCY DEPARTMENT

There are following *four stages* through a patient may pass in an emergency department of the hospital:

1. Reception and waiting
2. Examination, diagnosis and treatment, including resuscitation
3. Further clinical management
4. Transfer, which may imply admission as an *in patient, referral to out patient department, transfer to another hospital, or discharge*. Dead bodies may have to be transferred to *mortuary*.

## PLANNING OF THE HOSPITAL ACCIDENT AND EMERGENCY DEPARTMENT

### Physical Facilities

There is a need to have a separate independent department in large hospitals. While planning physical facilities, it is important to take *patient load* into account and also *space* for future expansion should be kept in mind, as the patient load in the emergency department of a hospital is gradually increasing.

The physical facilities of the department mainly in hospitals of category **C**, **D** and **E** should include accommodation for outpatients and inpatients in one block with a separate entrance for ambulance, all facilities for reception and immediate treatment including X-ray unit, operation theatres, clinical laboratory, the necessary supporting services and resuscitation services.

There should be an easy ambulance approach with sufficient space for free passage of vehicles and covered area for alighting patients. The arrangements for reception of trolleys and walking patients should be close by but independent. It should serve as waiting space also for persons accompanying the patients. As the accident cases are closely related with police department, a separate room for their use shall be provided in this area. Separate toilet facility for men and women should be provided in the vicinity.<sup>2</sup>

### Location

It should be located in the complex of the OPD

(Out Patient Department) for reasons of easy accessibility and sharing medical facilities with the OPD. It shall be placed on ground floor of the hospital. Guidance to the route from main entrance to the doorways of reception hall shall be provided. Adequate space for the passage of vehicles and covered area for alighting patients should be available at the entrance of the emergency department.

### Entrance

It should have a separate entrance for ambulance with adequate space for free passage of vehicles. The arrangement for reception of patients on trolleys and walking patients should be close, but independent. There should be ramps available for making transportation of patients easy. A two-way swinging door, which should be wide enough not to cause inconvenience to the patient flow should be provided.

### Other Facilities

The entrance should lead towards the space or lobby, which should provide the following facilities:

- A reception and information desk.
- Waiting area for the relatives and attendants of the patients.
- Separate toilets for men and women.
- A public telephone booth i.e. communication centre.
- Area for keeping wheel chairs and trolleys.

### Architectural Design

The design and planning should be such that the patients are easily accessible to the staff, with a separate private area, and there is uninterrupted *patient's flow*.

### Triage

The triage station should be positioned in an area where both non-emergent and critical patients can be accessed prior to their entry into acute treatment area.

### Treatment Area

It should be designed for right combination of maximum observation and privacy of the patient. Arranging cubicles in full view of central nursing station can do this. The front curtain can be left open for those

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## **IMPORTANT ASPECTS TO BE CONSIDERED WHILE PLANNING HOSPITAL ACCIDENT AND EMERGENCY DEPARTMENT**

It should be seen that the following have been taken into account while planning hospital accident and emergency department:

- Piped Oxygen and suction supply should be provided.
- Special attention should be given to the *lighting, temperature and humidity* control in the unit.
- A back-up alternate power source should be available so that in case of any electrical failure regular supply of electricity to the department is ensured.
- Doorways should be wide enough to accommodate stretchers, trolleys, portable X-ray machine, defibrillator etc.
- Floor covering and wall colours should be so selected so as to provide bright and functional atmosphere.
- Appropriate signage system should be designed so that patients are not lost in the unit.

## **COMMUNICATION**

In order to deliver quality medical care to the patients reporting to the unit it is essential that an *efficient communication system* must be in place, within the department and from the department to various other intensive care areas of the hospital. An effective and efficient communication system is the backbone of accident and emergency services. The technology of *telephone, intercoms, paging system and centralized computerization* can be used to develop an efficient communication system within the hospital.

## **EFFICIENT EMERGENCY MEDICAL SERVICES**

For *efficient* emergency medical services it is necessary to have:

- An efficient communication system.
- Speedy transportation of the accident victims for immediate first aid and resuscitation, starting from the place of accident.
- Co-ordination and harmonious working with the other hospitals especially identified for this purpose.
- A multi-disciplinary approach for the treatment of poly-trauma cases involving all the surgical and medical disciplines.<sup>1</sup>

An efficient emergency medical service should have the following criteria:

- Adequate physical facilities, equipment and stores should be available.
- Alert, competent well trained and empathetic staff that can render immediate and appropriate life-saving treatment, and also be able to meet the emotional requirements or needs of the patient and his attendants.
- A prompt and quick quality medical service with an efficient foolproof communication system.

*Accident and Emergency (A&E)* departments are specialized to handle patients with acute emergencies that require urgent medical assessment and treatment. But, it is found that A&E departments are becoming more of a popular venue for primary medical care. The significant increase of inappropriate attendance is considered as a serious threat to the healthcare system because of inefficient utilization of resources and depriving the true emergency cases of *quality care*.<sup>5</sup>

## **CENTRALIZED EMERGENCY MEDICAL SERVICES**

*Centralized Emergency Medical Services* should be developed to deal with the increasing number of cases of accidents and injuries. The need to have such service should be considered as National Health Service priority keeping in view that:

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- 50 percent of all categories of accident cases admitted are due to traffic accident.
- There is no organization efficient enough to deal with these large number of injuries and accident cases.
- The hospital beds are inadequate to deal with this vast problem.
- An efficient transport system to lift the patients from the scene of accident does not exist.
- It has been realized that the most efficient treatment of accident cases should start from the scene of accident itself.

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## EQUIPMENTS AND STORES OF HOSPITAL ACCIDENT AND EMERGENCY DEPARTMENT

In order to make the Emergency Medical Services (EMS) of a hospital as *efficient* and *effective* for delivery of better patient care, it is desirable that all types of equipments and stores required in the unit are sufficiently available and are in good working order. Without this even the efficient skills of clinical consultants may fail to benefit the patients.

Some of the *essential equipments* required in Hospital Accident and Emergency Department are:

- Ventilators
- Defibrillators
- Pulse Oximeter
- Drop Infusion Pump (Dosimeter)
- Suction Machine
- Laryngoscope
- Airway
- Cardiac Monitors
- Ambu Bag
- ECG Machine
- Portable X-Ray Machine
- Emergency Trolleys
- Splinting Equipments<sup>3</sup>
- Centralized piped Oxygen and suction supply

## MAINTENANCE OF EQUIPMENT

All the equipments in an emergency department should be periodically checked so that it is always in good working condition. The hospital should develop *preventive maintenance* policy to avoid *downtime* caused due to *breakdown maintenance* of the equipments.

## STAFFING

The staffing of the unit depends upon its *size*, *workload*, *type* of hospital and *resources* available. Emergency medical care is teamwork, where all the components play an important role in providing efficient and effective quality medical care to the patients. It is advisable to maintain the same type of staffing pattern during all times of the day to provide clinical care to the patients.

The persons considered essential to man the medical emergency services are:

- Emergency Medical Officer (EMO)
- Surgeons (General Surgeons, Neurosurgeons etc.)

- Anesthetists
- House-Surgeons
- Senior Residents
- Junior Residents
- Nursing Staff including Operation Theatre Nurses and other Staff
- X-ray technicians
- Laboratory technicians
- ECG technicians
- Blood technicians
- Nursing aids
- Drivers
- Sanitary Attendants

The Staff should be subjected to continuous *on-the-job* training so as to constantly upgrade their skills.

## CONCLUSION

The *Hospital Accident and Emergency Department* provides round the-clock, immediate diagnosis and treatment for illness of an urgent nature and injuries from accidents to patients. It is a very *critical* and *sensitive unit* of any hospital and is involved in the management of emergency medical cases. It provides the *first impression* on the patient, relatives and friends who come along with the patient to the hospital. It is an essential element in the contribution of the hospital towards the *total health care* of the community. An appropriate planning and management of logistics of the department is vital for rendering efficient and effective quality emergency medical care to the patients.

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