

# 14

## **RELATIONS AND INFORMATION EXCHANGE MODEL OF EMERGENCY MEDICAL SERVICES IN IRAN**

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### **14.1 INTRODUCTION**

Emergency medical service (EMS) in Iran has its own standards and guidelines in delivering life support services to the people in both, during normal and disaster situations. As such, a system should be designed in such a way that it is capable to assist and support the delivery of services to the people in needs. The primary step to realize these capabilities is through analysis of EMS service delivery processes. The analysis should include the identification of different parts within the processes and how each part relates to each other.

This paper explains the results of analyzing different sections and parts within Iran's EMS, together with their relations in the context of information exchange and communications. The results of the study could be used to improve existing information exchange system in pre hospital care services.

## **14.2 BASIC MODELS OF EMS**

Since 1970s, the mode of pre-hospital care is divided into two main service delivery models. These models are categorized as the Anglo-American and the Franco-German models. Both models become the most prominent models ever since 1970 until the end of 20<sup>th</sup> century. Most of the available EMS systems all around the world are the varied composition of these two models.

The Franco-German model of pre hospital emergency care is based on the “stay and stabilize” approach. The philosophy of this model is bringing the hospital to the patient. This method is widely implemented in Europe and mostly is running by physicians. Emergency physicians in the field have the authority to run complex clinical care and treat patients in the incident scene. As a result, many of the victims are treated at their place rather than transporting them to hospitals. This would results in less effort needed to transport patients to hospitals.

On the other hand, the Anglo American model is based on the “scoop and run” approach. The aim of this model is to reduce on scenes treatments for the accident’s victims and for the police and fire brigades to transport those victims quickly and rapidly to the hospitals. In this model, the EMS staff work closely with the police and fire brigades rather than hospitals and health services. Emergency medicine is highly developed and stored separately as preparation for emergency on scene treatments in countries which adapted this model. Almost all of victims of this type of emergencies model are transported to the emergency departments of hospitals rather than wards [1]. Currently both models are adapted by EMS in Iran but it seems Anglo-American model is widely use [2].

## **14.3 EMS PLACEMENT AMONG GOVERNING BODIES**

In the Islamic republic of Iran, the emergency medical services are one of the subsections of disaster management and medical

emergencies unit under the vision of medical universities' deputy. Each medical university in each province is under the Ministry of Science, Research and Technology. Each department within the medical universities receives its basic rules and regulations, general guidelines and standards from the ministry of health, treatment and medical education as they are the ones responsible of providing services in normal and disaster situations.

The disaster management and medical emergencies unit has four subsections. Each of the subsection works and interacts with each other.

- (a) Coordinating, announcing and handling the treatment affairs and subsidiaries centers.
- (b) Emergency Medical Services – 115.
- (c) Disaster management committee.
- (d) Workgroup of health and treatment in disaster situation.

#### **14.4 COMPONENTS OF PRE HOSPITAL CARE SERVICE**

The following section explains the components of the emergency medical services department. The components are :

- (a) EMS trained Personnel
- (b) Communication system (Dispatch)
- (c) Patient transport equipment (Ambulance)

The focus of this paper is to explain the relationship between the dispatch and ambulances which is extracted from communication through the radio and telephones. All incidents are reported to the EMS center by dialing number 115, which then are responded by registered nurses. The dispatch center is divided into three parts:

- (a) 115 nurses
- (b) Radio dispatch
- (c) Treatment director(physician)

All these three parts which placed inside the EMS center

develop relation with ambulance teams which should be in the incident scene and conduct EMS missions.

### **14.5 INFORMATION EXCHANGE**

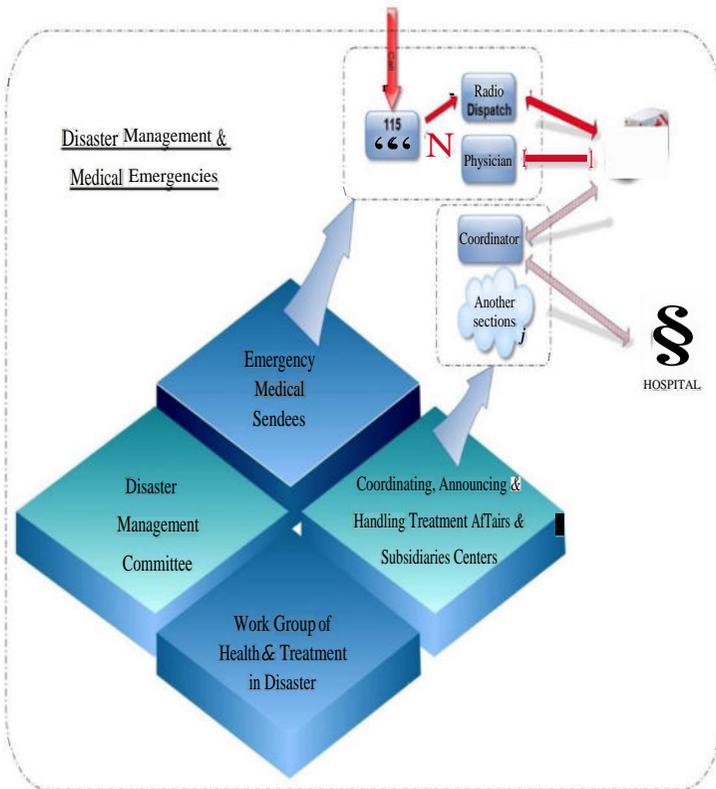
The nature of works determines the kind of information produced and exchanged between different parts of EMS. Some of this information is related to patient care in pre hospital service. However, this information is not recorded for future medical references. As a result, information related to patient care is not transfer to hospitals and no patients' history or any related medical documents are kept for a particular patient for future references.

Requirements for effective communication are necessary in special or rare cases. These are cases define as unusual and occurs infrequently. High and effective communication is required in these rare cases to allow continuous supply of equipments or specialists for patients in needs. Lacking in coordinating, announcing and handling the patients treatment and affairs could intervene the successful accomplishment of patients' treatment. A committee should be introduced and one person would be selected as a coordinator to coordinates special and rare cases. The coordinator should inform hospitals so that the hospitals are ready and prepared to accept patients. Currently, they are no relations and any information exchange occurring between EMS and hospitals in special and rare cases.

### **14.6 INFORMATION EXCHANGE MODEL IN PRE HOSPITAL CARE**

The following diagram shows the relations between different parts of EMS and their information exchange through radio and telephone calls. The solid arrows show relations and information exchanges which are permanent in every EMS missions. The dotted ones show temporary relations and information exchanges

which relates to special cases as mentioned previously in section 14.5. Also unidirectional arrows show one way information transfer in the form of reporting, meanwhile the bidirectional arrows show two ways of information exchange in the form of communication.



**Figure 14.1** Relation and Information Exchange Model of Emergency Medical Services in Iran

### 14.7 CHAPTER SUMMARY

This chapter discussed the models of EMS delivery and later

introduced a model consisting of different parts of dispatch centers which provide emergency medical services in Iran. The model shows the relations and information exchange between participants of EMS mission. This model also contains direction of relations to show whether information is reported or communicated between parties. This paper is based on a research on EMS system of Iran under the name of modeling of communicating and exchanging critical information in emergency medical services.

### REFERENCES

- [1] Al-Shaqsi, S. Z. K. (2009). EMS in the Sultanate of Oman. *Resuscitation*, 80(7), 740-2. doi: 10.1016/j.resuscitation.2009.04.011.
- [2] Bahadori, M. (2010). Emergency Medical Services in Iran: An Overview. *Australasian Medical Journal*, 3(6), 335-339.