

Studying the Causes of Late Arrival of Pre-hospital Care to the Patients in the View of Clinical Staff of Ahvaz EMS 115

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DOI: <http://dx.doi.org/10.13005/bpj/887>

(Received: September 01, 2015; accepted: November 20, 2015)

ABSTRACT

Since pre-hospital care is a crucial treatment component of critically ill patients, today, in urban health care system, generally reviewing and initial treatment of critical patient is conducted by the pre-hospital emergency and the more correct, accurate and more quickly it is done, the death and mutilation from diseases decline and on the other hand public confidence in the system increases. Therefore, this a method, the study will be conducted to evaluate the quality of pre-hospital emergency and investigate the causes of failure to get the patients to medical centers fast. This cross-sectional study investigates the viewpoints of the clinical staff of the Ahvaz EMS 115 on the main reasons of late transfer of patients to medical centers. To this end, the EMS 115 clinical staff were asked to fill a four-item questionnaire. The data were collected and statistically analyzed. Total of 154 personnel participated with average age of 44.4 ± 29.3 and had an average of 8.3 ± 3.17 years of work experience. Of them, 44.8% had diploma degree, 37.0% associate degree and 18.1% of them had a bachelor's degree. For these people, the most important factor in arriving late to emergency mission has been the waste of time for non-emergency missions, 48.7% knew the importance of this issue as high and 44.8% as very high. Other factors in order of importance were: lack of observing ambulance priority by people, poor urban texture for ambulance transportation, lack of enough emergency facilities and ambulances, physical location and location of the bases and ultimately in terms of subjects, low motivation of staff due to high traffic of missions and their fatigue. Other reasons of the late arrival of the ambulance to the patients from the perspective of the EMS 115 staff include: lack of awareness of the people and inappropriate culture of contacting emergency 115, failure to provide accurate and full address by the caller to emergency 115, the communication problems to control and track telephone intruders, the lack of personnel's update knowledge, non-emergency cases announced by the police force, lack of proper organization among the technician, doctor and patient, and lack of legal backing for 115 emergency personnel actively.

Key words: emergency medical service, Ahvaz, clinical staff, late arrival, causes of delays

INTRODUCTION

Incidents including accidents, poisoning, cardiovascular disease, conflict, falling from height, etc. may occur in the life of every human being¹. These factors lead to the loss of people's lives every year and injure a large number of people, and besides impose serious damage to the national economy². Accidents are one of the major health problems in the world today and mortality due to them are among the most common causes of death

in several countries including Iran³⁻⁴. Accidents are the second leading cause of death and disability in modern societies⁵. The number of people killed in accidents in our country is about 37,000 people of whom 65% is among men and 35% is among women most of those in the age group 15 to 44 years⁶. It is clear that correct and timely transfer of an injured person in such incidents can reduce the mortality and disability. In Emergency Medical Services (EMS) 115 centers, various diseases are detected and with an acute intervention, the patient's

condition is stabilized. These services include both pre-hospital emergency services and hospital emergency services⁷. Several studies investigated the causes of delay in the arrival of the pre-hospital unit to the patient. They see the most important factors as poor urban texture for ambulance transportation, lack of observing ambulance priority by people, lack of enforcement of laws related to the priority of ambulances by traffic police, lack of enough emergency facilities and ambulances, physical location and location of the bases and ultimately in terms of subjects, low motivation of staff due to high traffic of missions and their fatigue⁸. The standard protocol for ambulance arrival time should be less than 8 minutes⁹. One of the reasons for the delay is the lack of skills of the personnel. As in Iraq, with proper training of personnel and other people during the 4-year mortality rate of trauma reduced from 14.9 to 40%¹⁰⁻¹².

A study in 2007 in Tehran studied the kinds of internal problems that resulted in offering pre-hospital emergency care in the children. In that study, it was concluded that one-sixth of pre-hospital emergency services in Tehran are offered for children, the majority of which are due to internal problems. The most common causes of pre-hospital emergency contact were seizures, coma, and respiratory problems that need to be emphasized in the training of pre-hospital care personnel¹¹.

Since pre-hospital care treatment is a crucial component in critically ill patients, today, in the urban health care system, generally reviewing and initial treatment of critical diseases are done by pre-hospital emergency and as this impact is more correct, accurate and more quick, mortality and disability caused by the disease are reduced and the public confidence in the system increases. To improve the quality in the quality of offering pre-hospital care the current situation should be examined. Given the importance of this, using a cross-sectional method, the study will be conducted to evaluate the quality of pre-hospital emergency and investigate the causes of failure to get the patients to medical centers fast. To this end, a questionnaire with four choices was given to each of these people and after collecting the data, the responses were statistically analyzed.

MATERIALS AND METHODS

In this study, 115 emergency personnel's views and opinions were that formed the sample. Sampling was random and convenience in this study.

This study was conducted as cross-sectional in 2009 and according to the census on 115 emergency personnel of Ahvaz. To collect the data, with reference to 115 emergency bases in Ahvaz, at first personnel were asked to answer the questionnaires designed for this study carefully. Subjects voluntarily participated in this study. Finally, data were analyzed by SPSS software. In this study, to test average differences ANOVA statistical test and to evaluate the difference between the frequencies chi-square test were used.

RESULTS

In Ahvaz, there were 14 urban bases and 10 road bases, where in each urban base, there were 3 technicians with a bachelor's degree, associate degree, or diploma-trained technicians, and wireless set operator. In this way, about 170 people were working at the bases, of which 154 people participated in this study. The average age of participants was 29.3 with a standard deviation of 4.44 years. All the persons serving as a technician and paramedic in the emergency 115 department were male. Sixty-nine of them had diploma (44.8%), 57 (37.0%) associate and 28 had a bachelor's degree (18.1 percent). They experience of them on average was 3.8 years with a standard deviation of 3.17 years.

On the importance of time waste resulting from the deployment to non-emergency and false missions in arriving late to emergency missions, 10 stated the importance of waste of time caused by deployment to non-emergency and false missions as average (6.4%), 69 as high (44.8%) and 75 as very high (48.7%) (Figure 1).

In considering the importance of the improper urban texture for ambulances to move in arriving late to the mission of emergency, from among the subjects 2 subjects see its impotence

Table 1: Causes of late arrival on emergency missions in order of importance in views of the personnel of Ahvaz 115 unit

	Low	Average	High	Very high
A waste of time because of non-emergency mission	0%	6.4%	44.8%	48.7%
Non-implementation of the priority of ambulances by traffic office	2.5%	5.8%	48.7%	42.8%
Not respecting ambulance priority by people	1.9%	10.3%	42.8%	44.8%
Poor urban texture for ambulance transportation	1.2%	9.7%	48%	40.9%
Lack of enough emergency and ambulance bases	7.1%	24%	33.7%	35%
Physical location and location of bases and ultimately in terms of subjects	8.4%	20.8%	40.9%	29.2%
Low motivation of staff	15.5%	26.6%	40.9%	16.8%
High traffic of missions and their fatigue	28.5%	18.8%	27.2%	25.3%

as low (1.2%), 15 as average (9.7%) , 74 as high (48.0%) and 63 as very high (40.9%) (Figure 2).

In considering the importance of respecting priority of ambulances in arriving late to the mission of emergency, from among the subjects 3 subjects see its impotence as low (1.9%), 16 as average (10.3%) , 66 as high (42.8%) and 69 as

very high (44.8%) (Figure 3).

In considering the importance of heavy traffic of missions and fatigue from it in arriving late to the mission of emergency, from among the subjects 44 subjects see its impotence as low (28.5%), 29 as average (18.8%) , 42 as high (27.2%) and 39 as very high (25.3%) (Figure 3).

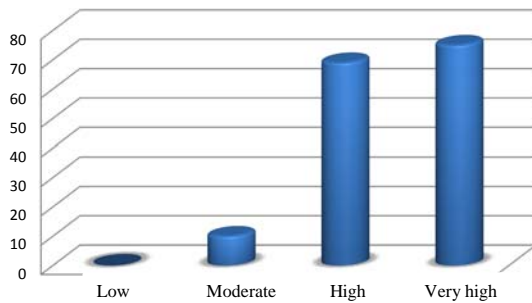


Fig. 1: The frequency graph of response of people on the effects of non-emergency missions

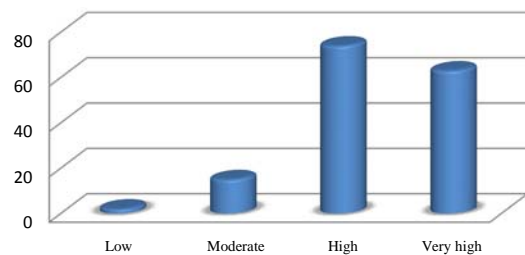


Fig. 2: The frequency of of response studying the effect of poor urban texture

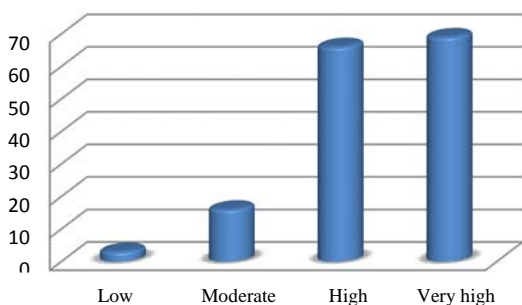


Fig. 3: The frequency of response of the subjects on the importance of non-compliance by the public emergency priority

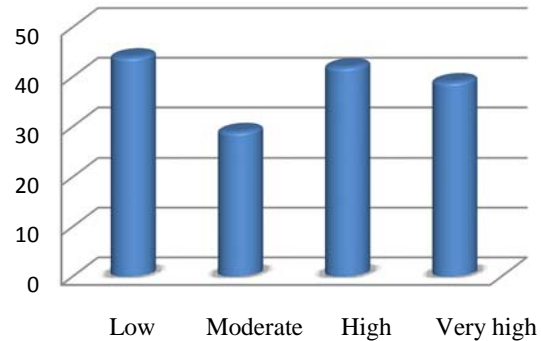


Fig. 4: The frequency of response of the subjects on the importance of traffic of missions and their fatigue

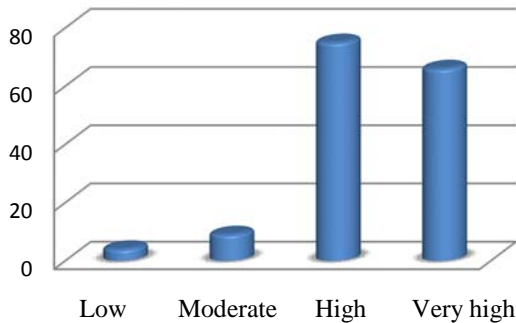


Fig. 5. The frequency of response of the subjects on the importance of non-implementation of traffic priority of ambulances by traffic office

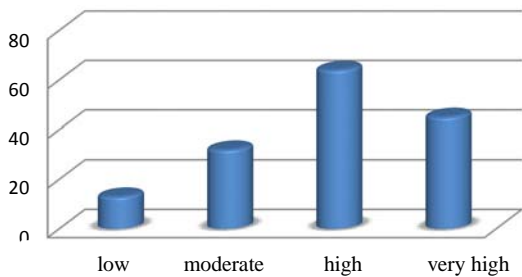


Fig. 6: The frequency response of the subjects on the importance of physical location and location of sites

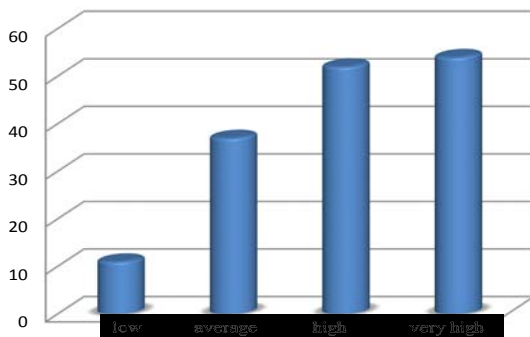


Fig. 7: The frequency of response of the subjects on the importance of lack of emergency and ambulance stations

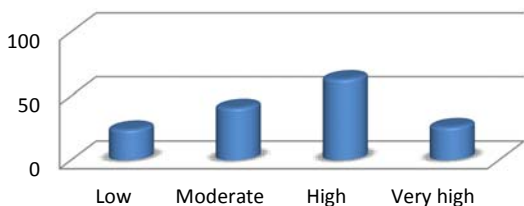


Fig. 8: The frequency of response of the subjects on the low motivation of staff

On the importance of non-implementation priority for emergency by traffic office and delay in the mission of emergency, 4 persons saw its importance as low (2.5%), 9 as average (5.8%), 75 as high (48.7%) and 66 as very high (42.8%) (Figure 5).

In studying the importance of physical location and location of bases in late arrival to missions of emergency, 13 of these people see its importance as low (8.4%), 32 as average (20.7%), 64 as high (41.5%) and 45 as very high (29.2%) (Figure 6).

On the importance of lack of enough number of bases and emergency ambulances in arriving late to the mission of emergency, 11 see its importance as low (7.1%), 37 as average (24.0%), 52 as high (35.0%) and 54 as very high (23.8%) were known (Figure 7).

On the importance of low motivation of staff late in the mission of emergency, 24 persons of low motivation of personnel low (15.5%), 41 average (26.6%), 63 high (40.9%) and 26 high (16.8%) knew (Figure 8).

Table 1 represents all of the studied factors in order of importance. Other reasons linked to the late arrival of the ambulance to the patients in the view of the Ahvaz EMS 115 personnel are lack of awareness of people and unsuitable culture for emergency 115 contact, failure to provide correct and complete address by calling the 115 emergency, problems of communication in order to control and track telephone intruders, personnel's not being update, non-emergency cases announced by law enforcement databases, lack of proper organization among technician, doctor and patient, and lack of legal support for emergency personnel 115.

DISCUSSION

In this study, 154 emergency 115 personnel Ahvaz took part. For these people, the most important factor in arriving late to emergency mission has been the waste of time for non-emergency missions, 48.7% knew the importance of this issue as high and 44.8% as very high. In the

next step was the non-implementation of ambulance priority by traffic office so that 2.5% saw its importance as low, 5.8% as average, 48.7% as high and 42.8% as very high. After these two important factors, other factors in order of importance were: Non-respecting ambulance priority by people, poor urban texture for ambulance transportation, lack of enough emergency rooms

and ambulances, the physical location and location base and low motivation of personnel and ultimately in the view of the study population, high traffic of missions and their fatigue have the least importance so that 28.5% of these people saw its importance as low, 18.8% as average, 27.2% as high and 25.3% as very high.

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