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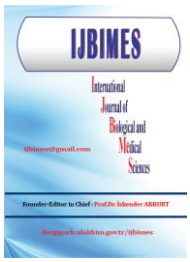

Research Article

The Evaluation of 112 Emergency Ambulance Services Uses in Amasya [#]

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Abstract: Emergency ambulance is a very important health care service that enables patients to maintain their life functions and make their immediate transfers to the nearest health care centres in case of life threatening incidence. The remaining 13.113 incidents were given emergency services. While 55% of these incidents patients were taken to hospitals, the reaming was attended in their original places. In this study emergency, medical services have been classified according to age groups. Genders transfer durations, sort of illnesses and types of hospitals in which transfers were made. According to the obtained data the gender distribution in 6375 males (52,39%), 5793 women (47,61%) and in the age groups people of the age of 75-79 became the largest group (9,28%). When the incidents were evaluated according to illness groups, illnesses that are not included in any classification were amounted to 48%, illnesses related to cardiovascular system were amounted to 15%, traumas 6%. When the incidents were considered in respect of time to reach the incident points, it was observed that 52% of the incidents were reached in 0-10 minutes of time. With this study, it has been concluded that as the ambulance demands have progressively been increased, good planning is inevitable in order not to be late in reaching emergency incidents and communication between hospitals and call centre must be in a high level in order to avoid any delays in case of transfers to hospital.

1. Introduction

Emergency ambulance services is a very important public health service which helps to maintain the vital functions of the patient during transport and provides access to emergency services as soon as possible in situations that threaten the patient's life and require emergency medical care [1]. The increases in the number of patients and in need for critical intervention have made the place of emergency patient transport in the health system more important [2]. The emergency ambulance services are provided under the management and administration of the command and control centres at the provincial or regional scale for twenty-four hours without interruption in the world [4]. The ratio of ambulance usage varies depending on the patient age, type of trauma, the severity of disease, geographic factors, case realization time, socioeconomic situation and insurance status [5]. In emergency aid, it is known that the first hour following injury is very valuable for patients in emergency situations such as cardiac arrest, airway obstruction, severe haemorrhage, severe chest and head traumas. It has been reported that the resuscitation and stabilization performed within this time increase healing and survival rate, therefore this period is described as "golden hour "[6-7]. In the world, the ratio of ambulance usage is increasing rapidly in cases of emergency such as hypertension, coronary artery diseases (CAD), chronic obstructive pulmonary disease (COPD), neurovascular diseases and traumas depending on the increasing elderly population [8]. The purpose of this study is to evaluate the use of the 112 emergency health services (EHS) the last 5 months of 2015 in overall Amasya.

2. Materials and Methods

This study took place after the approval of the Health Ethics Committee of Amasya University

(14.11.2016 date and E.10872 number). In study, it was retrospectively examined 112 emergency records of 15 pieces' emergency health services branches in Amasya and its districts between 1 August 2015 and 3 December 2015. 174 of these demands (1,31%) were reported unnecessary. The variables of study (Table 1-3) are based on existing data in the records.

3. Results

The scope of the study, a total of 13.286 patients was enrolled according to gender and age in 5 months' period. Distribution of the applications according to gender and age group was determined 47,61% women and 52,39% men patient of total application to be within 5 months. When applications for ambulance usage according to age groups were analysed, the applications of 65 years and older constituted more than 1/3 (38,37%) of total applications.

The evaluation of Amasya province by population was made according to 2014 population census results of the Turkish Statistical Institute (TUİK). The total population of Amasya province is 321.913 and 98.935 (30,73%) of this population live in the city centre. However, the remaining population of 222.978 (69.27%) live in Göynücek, Gümüşhaciköy, Hamamözü, Merzifon, Suluova and Taşova districts.

The frequency use of 112 ambulance service throughout Amasya province in the last 5 months of 2015 was 3,78%. Frequency use of ambulance service was 4,34% in the central district and 3.53% in other districts. The frequency use of ambulance was found to be significantly high in the central district. 173 of a total of 13.286 emergency calls were classified as groundless calls because of the absence of the injured, transport with another vehicle, groundless notification, and other reasons, and 10.699 (81,59%) of the remaining 13.113 calls were classified as medical calls. traffic accidents took the second place with 1089 (8.30%) cases among the other reasons (Table 1).

Table 1. *Distribution of 112 calls by the reasons*

Call reasons	n	%
Medical calls	10699	81,59
Traffic accidents	1089	8,30
Industrial accidents	31	0,24
Other accidents	515	3,93
Fire	51	0,39
Suicide	51	0,39
Injuries	101	0,77
Precaution	576	4,39
	13.113	**100,00**

While half of the pre-diagnoses (52,66%) made by the ambulance crew constituted the group for which no diagnosis could be made by the crew or the group for which no classification could be made, cardiovascular system diseases constituted about 1/6 (17,10) of all diagnoses at the second rank, traumatic diagnoses constituted about 1/12 (7,63%) of them (Table 2).

Table 2. *Distribution of patients according to the pre-diagnosis of the ambulance crew*

Pre-diagnosis	n	%
Cardiovascular system diseases	2081	17,10
Respiratory diseases	705	5,80
Neurological diseases	269	2,21
Gastrointestinal diseases	259	2,13
Psychiatric diseases	799	6,57
Urinary system diseases	239	1,97
Gynaecology and obstetrics diseases	173	1,42
Infection diseases	67	0,55
Metabolic and endocrine diseases	185	1,52
Neonatal diseases	54	0,44
Poisoning	0	0,00
Traumas	929	7,63
Other	6408	52,66
	12.168	**100,00**

Table 3. *Distribution of ambulance usage according to case results*

	n	%
Onsite response	675	5,08
Hospital transmission	7354	55,35
Transmission between hospitals	2608	19,63
Transport for medical research	92	0,69
Home transmission	519	3,91
Ex (left over)	169	1,27
Ex (mortuary transport)	4	0,03
Transport rejection	721	5,43
Others who reach	26	0,20
Injured none	62	0,47
Task cancelled	226	1,70
No suitable transport	0	0,00
Another vehicle to transport	132	0,99
By phone another vehicle to transport	0	0,00
Unfounded notice	54	0,41
Event on-site standby	589	4,43
Other	54	0,41
Private ambulance transport	0	0,00
	13.286	**100,00**

Ambulance service was effectively used by performing transport to hospital, transport from

hospital to hospital or timely intervention for 10.637 (80,06%) of emergency calls (Table 3). According to the scene, 169 (1,27%) of applic ations were left dead. When the distribution of ambulance usage according to patient types was analysed, it was seen that 12.122 (99,62%) of almost all of the patients were the citizens of the republic of Turkey, only 46 (38%) people consisted of tourists, refugees, foreign students studying in Turkey or foreigners with residence permit.

4. Conclusion

It was found out in this study that most of the 112 emergency ambulance cases in Amasya Province resulted in transport to the hospital. In this case, the perfection of the medical equipment of the ambulances used, so ensuring the fixation of shock fighting and trauma cases, thus the protection of emergency cases against preventable deaths and the removal of unwanted injuries that occur during the transfer of them should be aimed to be able to perform more rapid interventions. Deterrence and constructive measures should be taken to prevent groundless or fraudulent calls.

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