



Research Article

Ankara Med J, 2020;(2):416-425 // doi 10.5505/amj.2020.75768

FAMILY PRACTICE AWARENESS IN PATIENTS APPLYING TO THE EMERGENCY DEPARTMENT AND RECEIVING A GREEN TRIAGE CODE ACİL SERVİSE BAŞVURAN VE YEŞİL TRİYAJ KODU ALAN HASTALARDA AİLE HEKİMLİĞİ FARKINDALIĞI

 Cevdet Toksöz¹,  İbrahim İkizceli²,  Murat Koyuncu³
 Serap Biberöğlü²,  Fatih Çakmak²,  Derya Öztürk⁴

¹Balikesir State Hospital, Emergency Medicine Department, Balikesir, Turkey

²Istanbul University Cerrahpasa-Cerrahpasa Faculty of Medicine, Department of Emergency Medicine, Istanbul, Turkey

³Bahat Hospital, Emergency Medicine Department, Istanbul, Turkey

⁴Sisli Hamidiye Etfal Training and Research Hospital, Department of Emergency Medicine, Istanbul, Turkey

Yazışma Adresi / Correspondence:

Fatih Çakmak (e-mail: fatih.cakmak@istanbul.edu.tr)

Gelis Tarihi (Submitted): 26.12.2019 // Kabul Tarihi (Accepted): 13.05.2020



Öz

Amaç: Ülkemizde ve tüm Dünya’da acil servis kalabalığı önemli bir sorundur. Bu çalışmada amaç, Acil servise başvuran ve yeşil triyaj kodu alan hastalarda Aile Hekimi farkındalığını belirlemek, Aile Hekimi’ne başvurmama ve Acil servise başvurma nedenlerini ortaya koymaktır.

Materyal ve Metot: Bu çalışma, bir eğitim ve araştırma hastanesi acil tıp kliniği yeşil alana bir aylık dönemde başvuran hastalar ile yapıldı. Acil Servise başvuran hastalar Triyaj Bölümünde değerlendirildikten sonra Yeşil Triyaj Kodu olan hastalar bir hekim tarafından değerlendirildi. Akut acil patolojisi olmayan hastalar çalışma hakkında bilgilendirildi ve aydınlatılmış onam alındı. Onam veren hastalara anket uygulandı. Bin yirmi altı hasta çalışmaya alındı ve acil ve acil olmayan olarak iki gruba ayrıldı.

Bulgular: Acil durumu olmayan grupta 721 hasta bulunmakta iken, acil durumu olan grupta 305 hasta bulunmaktaydı. Acil nedenler ile ve acil olmayan nedenler ile Acil Servis’e başvuran hastaların cinsiyet, yaş eğitim ve acile başvuru sayısı arasında anlamlı farklılık yoktu. Acil nedenler ve acil olmayan nedenlerle yapılan Acil Servis başvurularında en yüksek oran, 18-29 yaş aralığındaki hasta grubuna aitti. Hasta yaşının artmasıyla Acil Servis’e acil olan ve acil olmayan nedenlerle başvuru sayısında düşme saptandı. Acil olmayan nedenler ile Acil Servis’e başvuran hastaların %57,30’u Aile Hekimi’nin kim olduğunu bildiğini; %42,70’i Aile Hekimi’nin kim olduğunu bilmediğini belirtti. Acil olmayan nedenlerle Acil Servis’e başvuran hastaların %52,10’u Aile Hekimi’nin çalıştığı sağlık merkezinin yerini bildiğini, %47,90’ı Aile Hekimi’nin çalıştığı sağlık merkezinin yerini bilmediğini bildirdiler.

Sonuç: Aile Hekimliği bilinci oluşturularak, Acil Servis’in yoğunluğunun azalması sağlanabilir. Aile Hekimliği’ne başvuru gücü, hastaların daha fazla Acil Servis başvurusuna neden olmaktadır. Aile Hekimi’ne başvuru kolaylığı Acil Servis’e gereksiz başvuruyu azaltacaktır.

Anahtar Kelimeler: Acil servis, triyaj, yeşil kod, aile hekimliği.

Abstract

Objectives: In our country and all over the world, the overcrowding of Emergency Service is seen as a problem. Our goal in this study is to determine Family Practice awareness of patients who applies to Emergency Service with green triage code and to find out reasons for using Emergency Service instead of Family Practice.

Materials and Methods: This study was performed in a training and research hospital emergency department for one month of the period. After patients, who applied to Emergency Service, were evaluated in Triage Department, the patients with Green Triage Code were assessed by a physician. Patients without acute emergency pathology were informed about the study, and informed consent was taken. It was provided to patients to answer the questionnaire. One thousand twenty-six patients were taken to the study and divided into two groups as emergencies and non-emergencies.

Results: There were 305 patients in the emergency group, and there were 721 patients in non-emergency group. There was no significant difference between an emergency and non-emergency group according to gender, age, education, and the number of emergency applications. The most frequent application was from the younger group of 18-29 age range in both groups. With the increase in the patient age, the number of applications to the Emergency Department due to emergency and non-emergency reasons decreased. 57.30% of the patients who applied to the Emergency Department for non-emergency reasons know who the Family Physician is; 42.70% stated that they did not know who the Family Physician was. 52,10% of the patients who applied to the Emergency Department for non-emergency reasons stated that they knew the location of the health center where the Family Physician worked, and 47.90% of them stated that they did not know the location of the health center where the Family Physician worked.

Conclusion: It can be provided to reduce the density of Emergency Service by creating Family Practice awareness. Application difficulties in Family Practice lead patients to apply to Emergency Service more. We believe that to ease application to Family Practice could reduce redundant applications to Emergency Service.

Keywords: Emergency service, triage, green code, family practice.

Introduction

According to the description made by WONCA (World Organization of National Colleges, Academies, and Academic Associations of General Practitioners/Family Physicians) Europe Region in 2002, Family Practice (FP), alias General Practice, is an academic and scientific discipline with its own educational content, research, evidence-based, and clinical practice and a clinical specialty orientated to primary care. Family practice is the first step of medical relations. FP cares everybody who is registered in its tract regardless of their ages, genders, or any characteristic of them. It develops an individual-based approach oriented person, his/her family, and society. It manages acute and chronic health problems of patients simultaneously. Most of the health problems that require application to physicians could be managed in primary care. FP encounters complaints, signs, and the early stages of the diseases; therefore, based on the symptoms, non-specific, and large number of diagnoses could be diagnosed in FP. It is expected from FP to consider psycho-social and cultural integrity, to reduce or to resolve complaints in a short time, and to diagnose by taking advantage of the patient's prior knowledge. As a result of studies, we concluded that 90% of symptoms and diseases could be solved in the first stage. Re-prescription of chronic medications of the patients, repeater, according to the physicians, is one of the most common issues that FP is facing.¹⁻⁴

Emergency Services (ES) are units providing health care to the people having a disease that could end up with severe pain, injury, or death without immediate treatment. A precise definition of the concept of emergency aid and urgent cases is very difficult. Thus each patient who thinks that he/she is an emergency patient, who stated that he/she is an emergency patient and who applied to ES should be evaluated. Until proven otherwise, the patient applied to ES should be evaluated as an emergency patient. None of the patients could be concluded as non-emergency without a full assessment. In our country and all over the world, the overcrowding of ES is seen as a problem. Despite the studies aiming to exclude non-emergency patients from ES, applications to ES have been increased by 20% over the past decade. Patients think that every problem of them is an emergency. Using ES inopportunately causes personnel to lose time and attention. This poses an obstacle to the real emergent patients that should be devoted more time and attention. A better triage system should be implemented to avoid this situation.⁵⁻⁷

The word triage is originated from the French word 'trier,' and it means 'to select,' 'to eliminate,' 'to separate' and 'to debug.' Today, modern triage is used to distinguish the patients who are waiting for medical help and have the potential for dangerous situations from the others; also, it is used to provide more effective care in situations that affect too many people and are called a disaster. It could be identified as aligning the priorities of patient care according to the severity and prognosis of the injury or disease and available sources. With the increasing number of patients applying to ES, especially with a low degree of urgency, triage has taken its place in routine use to able to give primary care to emergency patients.⁸⁻¹⁰According to the 'Communiqué on

Implementation Procedures and Principles of Emergency Service in Health Facilities with Bed' produced by the Ministry of Health and proclaimed in the gazette in 2009; red is used for worst emergency patient, yellow is used for emergency patient and green for non-emergency patient.⁹⁻¹¹

In our country and all over the world, the overcrowding of ES is seen as a problem. Our goal in this study is to determine FP awareness of patients who applies to ES with green triage code and to find out reasons for applying to ES instead of FP.

Materials and Methods

This study was performed in the Emergency Medical Clinic of Sisli Etfal Training and Research Hospital after the acceptance of hospital administration with the number of 04-01-2012/262. After the evaluation of patients who applied to ES in the triage department, patients with green triage code (GTC) were evaluated in the green department (GD) by an emergency medicine physician who does not know of the study. Patients who were not diagnosed as emergency pathology after the necessary examinations and tests were informed about the study. Patients who agreed to participate in the study and signed an informed consent form were included in the study and provided to fill the questionnaire. Foreign nationals, patients arrive at the emergency department via the ambulance, and patients under the age of 18 were excluded. One thousand twenty-six patients included in the study were divided into two groups as emergency patients and non-emergency patients. Emergency patient group was consist of patients with minor injuries, who requires many resources, who requires first aid and initial management, and with comorbid diseases. Patients with chronic obstructive pulmonary disease (COPD) and diabetes mellitus (DM) or cardiac disease could use adjuvant medical equipment and multiple drugs or could not do their daily tasks without help; these situations were considered as comorbid diseases. Non-emergency patient group was consist of patients who can wait without any resource use, without any injuries, who do not need any initial management. The non-emergency group patients are using ES because of the health system in our country. All patients who admit to ES are considered as emergency patients in our health system, and after the initial examination the patients are discharged from the hospitals if they don't have any emergency condition. This is why we have a non-emergency patient group.

Statistical method

Frequency and ratio values were used in the descriptive statistics of datum. A chi-square test was used when analyzing proportional datum. Fischer-exact test was used when the chi-square test's conditions couldn't be provided. SPSS 19.0 software was used for analysis.

Results

Twenty thousand one hundred fourteen patients were applied to ES during the month of study. Eight thousand nine hundred twenty-four of these patients took green triage code. One thousand twenty-six patients eligible for the study criteria were taken to the study. There were 305 patients in the emergency group, and there were 721 patients in non-emergency group. Five hundred fifty-five of the patients in the study were female, 471 were male. 54.10% of the patients applied to ES as emergency and non-emergency were female, and 45.90% of them were male. The most frequent application was from the younger group of 18-29 age range in both groups. In both groups, the most frequent applicants were primary school graduates. The frequencies of admission to ES were higher in first application in both groups, followed by 2-3 times group (Table 1).

Table 1: Demographic Information of Patients

		Emergency		Non-emergency		Total		p
		n	%	n	%	n	%	
Gender	Female	159	52.10	396	54.90	555	54.10	0.412
	Male	146	47.90	325	45.10	471	45.90	
Age	18-29	138	45.20	303	42.00	441	43.00	0.557
	30-39	82	26.90	200	27.70	282	27.50	
	40-49	47	15.40	116	16.10	163	15.90	
	50-59	27	8.90	70	9.70	97	9.50	
	60-69	6	2.00	26	3.60	32	3.10	
	70 ≥	5	1.60	6	0.80	11	1.10	
Education	Illiterate	2	0.70	6	0.80	8	0.80	0.263
	Primary school	158	51.80	371	51.50	529	51.60	
	High school	97	31.80	260	36.10	357	34.80	
	University(least)	48	15.70	84	11.70	132	12.90	
Number of applying to ES	None	146	47.90	354	49.10	500	48.70	0.714
	1 time	28	9.20	53	7.40	81	7.90	
	2-3 times	122	40.00	287	39.80	409	39.90	
	4 ≥	9	3.00	27	3.70	36	3.50	
Total		305	100	721	100	1.026	100	

Table 2: Patients' reasons to use ES and information levels about FP

Patients' reasons to oft-use medical institutions and information levels about FP		Results	
Questions	Replies	n	%
Where do you go to make your medicine to be receipt?	None	168	23.30
	Emergency Services	102	14.10
	Polyclinics	174	24.10
	Family Practices	277	38.40
Where do you go for injections or dressings?	None	160	22.20
	Emergency Services	285	39.50
	Polyclinics	152	21.10
	Family Practices	107	14.80
	Pharmacy	17	2.40
Do you know your Family Practitioner?	Yes	413	57.30
	No	308	42.70
Do you know your Family Practitioner's name?	Yes	159	22.10
	No	562	77.90
Do you know FPC?	Yes	376	52.10
	No	345	47.90
Do you know your Family Practitioner's phone number?	Yes	46	6.40
	No	675	93.60
Did you apply to FP before?	Yes	318	44.10
	No	403	55.90
Are you pleased with your FP?	Well pleased	52	16.40
	Pleased	191	60.10
	Indecisive	61	19.20
	Unpleased	12	3.80
	Very unpleased	2	0.60
What is the reason for not applying to FP?	Doesn't know FP	150	37.20
	Distance of FPC	249	61.80
	Hospital Personnel	1	0.20
	Doesn't trust FP	3	0.70
TOTAL		721	100

(FPC: Family Practice Center, FP: Family Physician)

When we examined conditions of chronic disease in the history of patients, the most common diseases were COPD and heart diseases in both groups. They were followed by patients with co-morbid diseases (Figure 1).

When assessing health facility uses, we determined that FP was preferred more than ES for repeated prescriptions; the rate of ES preferability was 14.10%. ES was more preferred for injection and dressing. 57.30% of the non-emergency patients knew their family physicians, but only 22.10% of them knew the names of their family physicians. Almost half of the patients did not know the location of the family physician center (FPC), and only 44.1% of them said that they had applied to FP before. 61.80% of patients substantiated

distance of FPC for not-applying to FP, only 0.70% of them said that they do not trust family physician. 35% of the non-emergency patients in the ES application group indicated that they applied to ES for dressing and injection. 14.80% of the green code patients who are not considered as emergency patients stated that they apply to FP for injection and dressing. We have seen that 55.90% of non-emergency patients applied to ES have never applied to FP before. When we examined their reasons to not apply to FP, we realized that 37.20% of the patients didn't know their FP, and 61.80% of them didn't apply because of accession difficulties despite knowing their FP. We determined that social insurance and proximity were the most common reasons for applying ES, the ratio was 70.30% (Table 2).

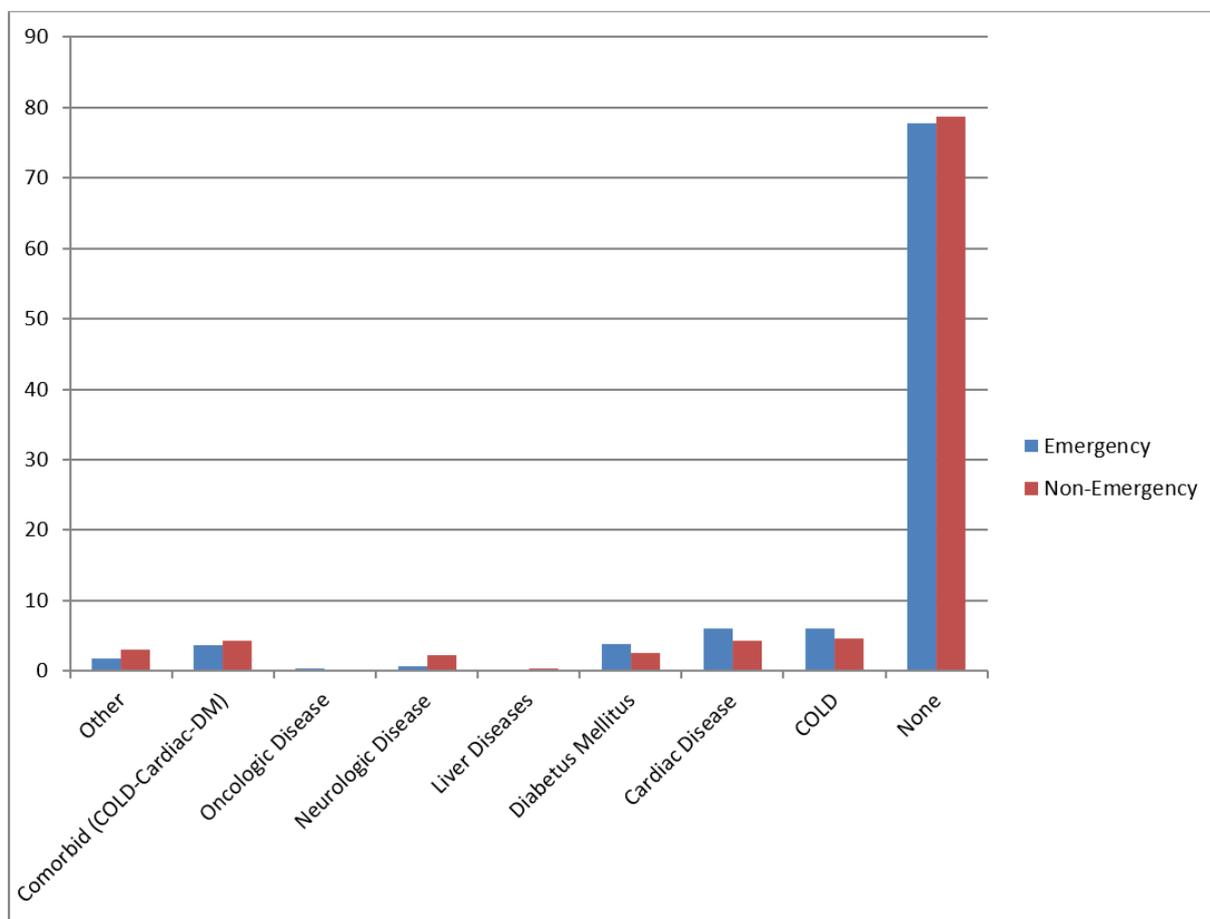


Figure 1: Chronic Disease Levels of Emergency and Non-emergency Patients (COLD= Chronic Obstructive Lung Disease, DM= Diabetes Mellitus)

Discussion

Emergency services provide more extensive and faster healthcare than most of the branches of medicine. Due course of law, Emergency Services are supposed to provide a comprehensive treatment to each patient irrespective of their social insurance and payment status 365 days 24 hours. Ideally, in an emergency service, examination and treatment should be provided as soon as possible for each patient. However, that couldn't be provided in many ES's because of reasons like patient overcrowding, lack of resources, or personnel. Therefore, the use of triage systems has come to the fore. In performing the triage area, initial evaluations are made, and patients are divided into two groups as emergency patients and non-emergency patients. In our country, according to the Emergency Medical Services Regulation, all of the emergency services of private hospitals and public hospitals accept all emergency patients without exception. Emergency medical assessments, medical attention, and stabilization, when needed, are provided for each patient.^{7,11} This study examined awareness of non-emergency patients applying to emergency service for non-emergency about family practice.

In the study of Aydin et al., they stated that there is overcrowding and improper using in ES nationwide. They also emphasized that this overcrowding leads personnel to lose time and attention. In this case, they couldn't spare time to emergency patients who need time and attention, so they are influenced negatively.⁷ In our study, 35% of the non-emergency patients in the ES application group indicated that they applied to ES for dressing and injection. 14.80% of the green code patients who are not considered as emergency patients stated that they apply to FP for injection and dressing. Providing service only within studying hours of FP and being convenient after studying hours due to daily study routine of patients could be reasons for this situation. To create patients' awareness about applying to FP for injection and dressing could reduce overcrowding in ES and provide more efficient studying environment for ES personnel.

When we analyzed the reasons for ES preference, we determined that social insurance and proximity were the most common reasons for applying ES. In the study of Worthington et al., they stated that reasons for patients' preferring ES could be their following recommendations made by other patients who previously get qualified service in ES and social insurance issues.¹² Cooke et al. emphasized that 29.40% of patients who examined by ES physicians don't need further investigation or any treatment.¹³ In our study, this ratio was 70.30%. The reason for this could be that our studying group patients were among green code patients instead of all patients.

In their study, Kilicaslan et al. determined that 47.20% of patients who applied to ES are male, and 52.60% are female.¹⁴ In their study, Polat et al. determined that 44% of patients who applied to ES are male, and 56% are female.¹⁵ In our study, we have similar results. The number of male and female patients who applied to ES are too close to each other, and in terms of gender distribution, there is no significant difference (Table 1). This finding is consistent with the literature.

In their study, Kilicaslan et al. found out that 21.20% of patients who applied to the ES are in the 20-29 age range, 16.20% in the 30-39 age range, 16.60% in the 40-49 age range and 1.50% of them are over 80 years old.¹⁴ In the study of Polat et al., they found out that 24.60% of patients who applied to the ES are in the 14-30 age range, 13% in the 31-40 age range, 16.2% in the 41-50 age range and 41% of them are over 50 years old.¹⁵ In our study, we found out that 43% of patients are in the 18-29 age range, 27.50% in the 30-39 age range, 15.90% in the 40-49 age range, 3.10% in the 60-69 age range and 1.10% of them are over 70 years old. The reason of the difference between our study and other studies is the patient population of our study was only the green triage code patients, but in other studies their population was all patients who apply to ES.

In the study of Ersel et al., it was determined that 3.90% of the patients in ES are illiterate, 2.80% are literate, 23.40% are primary school graduate, 14.50% are secondary school graduate, 28.30% are high school graduate, 27.20% are university graduate.¹⁶ In our study, it seems that elementary and high school education has the highest rates. In the region of our hospital, there are a lot of business centers, and employees of these business centers prefer our hospital due to their social insurances, we think that this is the reason of those rates.

In our study, when we analyze the application frequency to ES, it is shown that the percentage of the patients who didn't apply to ES is 48.70% in the last month, but the percentage of the patients who reapplied to ES 2-3 times is 39.90%. We think that the reason for this is patient satisfaction in our ES.

When we examine the non-emergency group of ES patients, we found out that 14.10 of the patients prefer to come to ES for the re-prescription of the medicines they use. Emergency services could also be accessed in out of studying hours due to its round the clock service, and they provide services free thanks to Circular entitled 'Abolition of the Cash Desk in Emergency Services,' dated 31/01/2011 and numbered 4601, issued by the Ministry of Health. So these lead patients to prefer ES.¹⁷ However, it is a fact that this situation increases overcrowding in ES. If we create awareness about that family physicians could follow-up the patients who want their medicines to be pre-prescribed and evaluate their medicines according to this follow-up, this could prevent the applications for chronic follow-up and improve productivity of ES.

In the study of Cetinkaya et al., they asked the patients the question, " Which medical institution do you prefer when you or one of your family members become sick? ", 49.70% of the patients said they generally use family practices, 25.10% said private hospitals/polyclinics, 16.50% said public hospitals, and 8.70% said they prefer training hospitals. As the reason for preferring these institutions, 39.20% of them said that their reason to prefer facilities is proximity, 18.60% said that technical opportunities are better than the others in the facilities they choose for health care, 4.20% said that they prefer the facilities because they have acquaintances in there and 2.90% indicated that they make their decisions according to financial situations.¹⁸ In our study, we have

seen that 55.90% of non-emergency patients applied to ES have never applied to FP before. When we examined their reasons to not apply to FP, we realized that 37.20% of the patients didn't know their FP, and 61.80% of them didn't apply because of accession difficulties despite knowing their FP. However, FP units were determined according to their registered address within the scope of the "health conversion project" by the Ministry of Health. It was also planned to deploy FP centers in easily accessible places that were identified on the map for family physicians.¹⁹ The reason for opposing our work, and this situation could be based on that work area of the study, is a metropole city and accession to hospitals is easy due to public transports.

Eventually, the patients who want to re-prescribe their medicines and who need injection or dress prefer to apply ES. This situation causes overcrowding in ES. By creating awareness about FP, overcrowding in ES could be reduced. Difficulties while applying to FP lead patients to apply to ES. We think that improper applications to ES could be reduced by providing convenience in applying to FP.

References

1. Akpınar A. Düzce İli Aile Hekimlerinin Yaşadığı Etik Sorunlara Dayanan Bir Etik Eğitim Programı Önerisi. Konuralp Tıp Dergisi 2013;2013:3-10.
2. Başak O. Bir disiplin olarak aile hekimliğinin ülkemizdeki gelişim özellikleri. Türkiye Aile Hekimliği Dergisi 2013;17:29-36.
3. Karaoğlu N. Topluma Yönelik - Topluma Dayalı Tıp Eğitimi ve Aile Hekimliği. Turkish Journal of Family Medicine and Primary Care 2012;6:1-6.
4. Rodoplu Ü. Editöre Mektup. Türkiye Aile Hekimliği Dergisi 2007;1:243-6.
5. Tuğcu H, Yorulmaz C, Ceylan S, Baykal B, Celasun B, Koç S. The knowledge and ideas of the physicians who participate in emergency services about physician responsibility in emergency cases and forensic medicine problems. Gulhane Medical Journal 2003;45:175-9
6. Choi Y, Wong T, Lau C. Triage rapid initial assessment by doctor (TRIAD) improves waiting time and processing time of the emergency department. Emergency medicine journal 2006;23:262-5.
7. Aydın T, Aydın ŞA, Köksal Ö, Özdemir F, Kulaç S, Bulut M. Uludağ Üniversitesi Tıp Fakültesi hastanesi acil servisine başvuran hastaların özelliklerinin ve acil servis çalışmalarının değerlendirilmesi. Akademik Acil Tıp Dergisi 2010;9(4):163-8.
8. Çevik C, Tekir Ö. Acil Servis Başvurularının Tanı Kodları, Triyaj ve Sosya-Demografik Açından Değerlendirilmesi. Balıkesir Sağlık Bilimleri Dergisi 2014;3:102-6.
9. Şen Tanrıkulu C, Tanrıkulu Y, Karaman S. Acil Servis Başvurularının ve Acil Servisten Yatırılan Hastaların Gözden Geçirilmesi: Bir Eğitim Hastanesinin Kesitsel Analizi. J Clin Anal Med 2014;5:130-4.
10. Akyolcu N. Acil Birimlerde Triyaj. İÜ FN Hemşirelik Dergisi 2007;15:7-17.

11. Çevik C. Emergency Service Admission Evaluation of Diagnosis Codes, Triage and Socio-Demographic. *BSBD* 2014;3:102-7.
12. Worthington K. Customer satisfaction in the emergency department. *Emergency medicine clinics of North America* 2004;22:87-102.
13. Cooke M, Arora P, Mason S. Discharge from triage: modelling the potential in different types of emergency department. *Emergency medicine journal* 2003;20:131-3.
14. Kılıçaslan İ, Bozan H, Oktay C, Göksu E. Türkiye’de acil servise başvuran hastaların demografik özellikleri. *Türkiye Acil Tıp Dergisi* 2005;5:5-13.
15. Polat O, Kabaçam G, Güler İ, Ergişi K, Yıldız A. İbn-i Sina Hastanesi Acil Servis’ ne başvuran hastaların sörveyans analizi. *Türkiye Acil Tıp Dergisi* 2005;5:78-81.
16. Ersel M, Yürüktümen A, Özsaraç M, Kıyan S, Aksay E. Türkiye’deki Acil Tıp Anabilim Dallarının uluslararası yayın üretimi: 15. yıl değerlendirmesi. *Tr J Emerg Med* 2010;10:55-60.
17. Sağlık Bakanlığı [İnternet] <https://www.saglik.gov.tr/TR,11032/acil-servislerde-bulunan-veznelerin-kaldirilmesi-20116.html> (Erişim Tarihi: 20.01.2020).
18. Çetinkaya F, Baykan Z, Naçar M. Yetişkinlerin Aile Hekimliği Uygulaması ile İlgili Düşünceleri ve Aile Hekimlerine Başvuru Durumu. *TAF Preventive Medicine Bulletin* 2013;12:417-424.
19. Resmi Gazete [internet] <https://www.resmigazete.gov.tr/eskiler/2010/05/20100525-10.htm> (Erişim Tarihi: 20.01.2020).