Retrospective Evaluation of Family Medicine Outpatient Clinic Profile at a Tertiary Hospital in İzmir

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ABSTRACT

Objective: Primary Health Care is defined as, the health institutions and the produced services where diagnostic procedures and treatment of 95% of admitted patients are performed, besides referring patients to secondary and tertiary hospitals in certain circumstances and serving preventive health care. In this study we assess two-month patient profiles and develop recommendations based on the data obtained from our outpatient clinics in a tertiary hospital.

Methods: This is a cross-sectional study in which 1708 patients whom were referred to a tertiary hospital family medicine outpatient clinic in Izmir between 1.11.2015 and 31.12.2015 were evaluated retrospectively. Age, gender, smoking behavior, admission requests, diagnoses, consultation, laboratory tests and prescription data of patients were obtained.

Results: The mean age of patients enrolled in the study was 47.11±16.70 years and 545 (68.2%) patients were women. The average of application per patient was 1.5±1.2 to a family medicine outpatient clinic in a tertiary hospital. The most common admission was the demand for physical examination with 500 patients (62.6%). The most common complaints in the physical examination group were stomach related complaints (15%), abdominal pain (12.4%) and body pain (11.0%). Among the 500 patients, 398 (79.6%) were investigated by laboratory tests, 289 (57.8%) were prescribed, and 108 (21.6%) were referred to other clinics. The rheumatology clinic was the most commonly referred to with 22.2% (n:24) of patients.

Conclusion: It is important to give an appropriate education during resident training and encourage continuing medical education about monitoring and management of chronic diseases, vaccines, child and pregnancy surveillance issues and other commonly observed complaints in order to provide quality primary care services.

Keywords: Family medicine, outpatient clinics, diagnose, frequency

INTRODUCTION

Primary health care services, which are at the center of the organization of health services, are defined as health care institutions and health services that are produced, which individuals apply to for various reasons, in which the diagnosis and treatment are provided for those who apply, in which they are referred to secondary and tertiary health care institutions when necessary, and in which preventive health services are offered (1, 2). In developed countries, primary health care is among the turning points of health system reforms. A strong primary health care system is directly related to the development of community health (3).

Along with the citizen-centered Health Transformation Program, which started in Turkey in 2003, the needs, demands, and expectations of the individuals were started to be taken into consideration in the planning and provision of the primary health care services, and the discipline of family medicine which has its own educational content, research, evidence base, and clinical application has become one of the key components in the execution of primary health care

(4-6). Today, however, it is noteworthy that there are various deficiencies and problems in the delivery and maintenance of primary health care services in our country (4). One of the most important problems encountered in the provision of effective primary care services in our country is that the institutions providing secondary and tertiary care services are used as the first application center, and the work load in these institutions increases unnecessarily (7).

The duration of the family medicine assistantship training in our country has been determined to be 3 years. With the adoption of the new core/framework educational curriculum by the Specialty Board in Medicine in 2010, the duration of mandatory rotations was reduced to 18 months, and the remaining 18 months was decided to be spent in the family medicine in order to enable clinical applications (8, 9).

In the present study, we aimed to evaluate the 2-month patient profile of our family medicine polyclinic, which provides primary health care services in a tertiary health care institution, and to improve suggestions through the data we obtained.

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METHODS

This is a cross-sectional descriptive study in which the data of 1708 patients who applied to the family medicine polyclinic in a tertiary hospital in İzmir between November 1, 2015 and December 31, 2015 were evaluated retrospectively. Due to the retrospective design of the study, informed consent was not taken. The data of the study was obtained from the central data processing and registration system of our hospital. The study was approved by the ethics committee of the Non-Interventional Clinical Investigations of our hospital (February 25, 2016, decision no. 28). Age, gender, smoking status, reasons for application, diagnosis, request for consultation/medical test, and the data of prescriptions of the patients were obtained. The applications of the same patients for control were not considered as separate applications.

Statistical Analysis

Statistical analyses were performed using the IBM Statistical Package for Social Sciences 21.0 (IBM Statistics.; Armonk, NY, USA). Descriptive statistics were given as number, percentage, and mean ± standard deviation. Chi-square test was used to compare categorical variables among the groups. A p value <0.05 was considered to be statistically significant.

RESULTS

Since they had incomplete data, 909 patients were excluded from the study. Of the 799 patients included in the study, 545 (68.2%) were females and 254 (31.8%) were males, and the mean age of the patients was 47.11±16.70 years. The average age of women was 47.38±16.30 years; the average age of men was 46.53±17.54 years. The most frequent application was in the 46–64 years age group with 319 patients. The distributions of the patients by gender and age group are shown in Table 1.

Of the patients, 182 (22.8%) stated that they applied to the polyclinic of tertiary family medicine with their own will. The mean number of the applications to the tertiary family medicine polyclinic of the patients was 1.5±1.2. While 569 patients (71.2%) applied to the polyclinic only once, 227 patients (28.4%) stated that they wanted to continue their follow-ups at our polyclinic. Of the patients, 370 (46.3%) reported to have no additional diseases.

Of the patients who applied, 143 (17.9%) were smoking. There was a statistically significant difference in smoking status according to gender and age group (p=0.004 and p<0.001, respectively). Of the females, 15.2% (n:83) were smokers, and this ratio was 23.6% (n:60) in male patients. When the frequency of smoking was examined according to the age groups, the patients in the age group of 19–45 years were found to smoke most frequently (23.7%).

The requests of the patients who applied to the polyclinic of family medicine were investigated under the titles of getting prescription, getting examined, requesting for medical test, general health examination, drug report renewal, and chronic illness. The most frequent application to the polyclinic was constituted by 500 patients (62.6%) who applied for getting examined (Table 2).

The complaints related to stomach pain (15%), abdominal pain (12.4%), and body pain (11%) were the most common in the patients who were examined. The distribution of the complaints was also found to be similar in the 46–64 years age group in which the patient application was the most frequent (Table 3).

When the distributions of the first diagnoses of the patients were examined, stomach discomforts were the most common with 118 patients (14.8%), musculoskeletal and rheumatologic diseases were in second place with 93 patients (11.6%), and normal physical examination was in third place with 81 patients (10.1%) (Table 4).

Considering all the diagnoses of 799 patients included in the study, it was observed that 238 (29.7%) of the patients had hypertension, 164 (20.5%) had diabetes mellitus, 139 (17.3%) had stomach diseases, 88 (11%) had hyperlipidemia, and 69 (8.6%) had anemia. When the ratios of these diseases were examined in terms of gender and age, it was observed that the rates of stomach discomforts were not statistically different according to gender and age, and the ratio of diabetes mellitus was not statistically different according to gender (p=0.085, p=0.123, and p=0.785, respectively) (Table 5).

Of the 500 patients who applied to be examined, 289 (57.8%) were given a prescription, 3 (0.6%) were given a drug report, 398 (79.6%) underwent medical tests, and consultation was requested from other branches for 108 (21.6%) patients. Consultation was most frequently requested from the rheumatology department at a rate of 22.2% (n:24).

DISCUSSION

Despite the diversity of health needs and resources, the main aim of health systems is to optimize the health level as much as possible and to minimize the differences in access to health services for individuals and groups (3). In addition to the fact that the family physician is the first point of medical contact, he/she is also responsible for the complete use of health services. Considering the practice worldwide, family physicians provide treatment

Table 1. Distribution of patients who applied to the polyclinic according to age and gender

Age	Female (n=545)	Male (n=254)	Total (n=799)
18 years and under	15 (1.9%)	15 (1.9%)	30 (3.8%)
19–25 years	55 (6.9%)	29 (3.6%)	84 (10.5%)
26–45 years	164 (20.5%)	68 (8.5%)	232 (29.0%)
46–64 years	223 (27.9%)	96 (12.0%)	319 (39.9%)
65 years and over	88 (11.0%)	46 (5.8%)	134 (16.8%)

Table 2. Distribution of reasons for applications to family medicine polyclinics.

Reason for the application	Number (%)
For getting prescription	31 (3.9)
For getting examined	500 (62.6)
For requesting a medical test	71 (8.9)
For general health examination	153 (19.1)
For drug report	26 (3.2)
For follow-up of a chronic disease	18 (2.3)

for diseases at appropriate levels, follow the services given to patients, arrange coordination between service units, and guide patients to access specialist physicians (3). In cases where referral is required, more economical and effective use of the secondary health care services, which cost more than the primary health care services, is enabled by ensuring the person to go to the right specialty branch and to the right center along with his/her health information (3). Family physicians integrate preventive medicine, which is one of the basic applications of the discipline, with treatment and rehabilitative practices. While the health services pro-

vided in hospitals include the improvement of health, they generally do not involve preventive health services. The practice of family medicine is not limited to a specific stage of disease, but it also includes services that need to be provided during healthy periods and follows the individual during his/her life.

When national and international studies are examined, it is noteworthy that the application of women to the primary health care services is higher (46% and 6%–86%, respectively). In our study, the result was found to be consistent with the literature with a rate of 68.2% (7, 9-11).

In other studies conducted when the average age of the patients was examined according to gender, the average age of women was higher, whereas the average age of women was similarly higher than that of men in our study (7, 10, 12, 13).

Topallı et al. (12) reported that 68% of the 197 patients who applied for the first time at Kocaeli University Family Medicine polyclinic had a clinical complaint, and similar to the present study conducted in 799 patients, 62.6% of the patients also had a clinical complaint. When they investigated the chronic diseases of the patients in their study, Topallı et al. (12) found hypertension in 32.5% of the patients, obesity in 15.2%, diabetes mellitus in 10.7%, and dyslipidemia in 8.1%, whereas hypertension was detected in 29.7% of the patients, diabetes mellitus in 20.5%, and dyslipidemia in 11.0% in our study.

In the fieldwork carried out between 2002 and 2008, Üstü et al. (3) stated that while the number of yearly applications per capita was 1.9 in 2002, it increased to 4.5 in 2008. They also stated that the applications to primary health care institutions among all applications to health institutions decreased from 38% to 33% between 2002 and 2008. In our study, it was determined that only 22.8% of the patients applied to the family medicine polyclinic to be examined and that 77.2% applied to the hospital to be examined in other branches, and then they were referred to us. We think that this is caused by the fact that the family medicine polyclinic service is provided in the secondary and tertiary health care institutions not commonly known by the society.

In their study that they conducted in 1227 patients in primary health care, Şensoy et al. (2) found that when the participants encountered a health problem, 60.8% applied to a health center,

Table 3. Distribution of the five most frequent complaints in the applications to polyclinic according to age groups.

Reason for the application	Age groups			
	18 years and under	19–45 years	46–64 years	65 years and over
Stomach complaints	9 (1.8%)	28 (5.6%)	29 (5.8%)	9 (1.8%)
Abdominal pain	8 (1.6%)	16 (3.2%)	32 (6.4%)	6 (1.2%)
Body pain	4 (0.8%)	20 (4.0%)	19 (3.8%)	12 (2.4%)
Malaise	5 (1.0%)	15 (3.0%)	15 (3.0%)	1 (0.2%)
Coughing	5 (1.0%)	8 (1.6%)	10 (2.0%)	9 (1.8%)

Table 4. Distribution of the first diagnoses of the patients applying for examination.

Diagnosis	Number (%)
Stomach-related diseases	118 (14.7)
Musculoskeletal/rheumatologic diseases	93 (11.6)
Normal physical examination	81 (10.1)
Diabetes mellitus	76 (9.5)
Hypertension	68 (8.5)
Upper respiratory tract diseases	49 (6.1)
Other gastrointestinal system diseases	59 (7.4)
Iron deficiency anemia	59 (7.4)
Genitourinary system diseases	47 (5.9)
Thyroid diseases	23 (2.9)
Lower respiratory tract diseases	21 (2.6)
Vitamin B12 deficiency	18 (2.2)
Hyperlipidemia	15 (1.9)
Pregnancy	10 (1.3)
Dermatological diseases	8 (1.0)
Obesity	7 (0.9)
Cardiologic diseases	7 (0.9)
Neurological diseases	6 (0.8)
Others	34 (4.3)

Table 5. Differences in the most common diagnoses in terms of age and gender

Diagnosis	Variable	p
Hypertension	Age	<0.001
	Gender	0.034
Diabetes mellitus	Age	<0.001
	Gender	0.785
Stomach diseases	Age	0.123
	Gender	0.085
Hyperlipidemia	Age	<0.001
	Gender	0.004
Anemia	Age	0.006
	Gender	<0.001

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31.9% applied to a state hospital, and 3.4% applied to a university hospital. They also found that 41.8% of the patients applied to the institutions for getting examined, 26.7% for getting prescription, and 10.9% for getting family planning services. In our study, it was determined that 81.7% of the cases applied in order to be examined (62.6% for examination due to any complaint and 19.1% for periodical health examination). We think that this high ratio was caused by the fact that the applications to tertiary health care were due to a specific complaint.

In another retrospective study conducted in 1961 patients in 2014, Şensoy et al. (14) asserted that 24.9% of the patients came for general health examination, 19.1% were diagnosed with upper respiratory tract infections, 9% were diagnosed with hypertension, 4.2% were diagnosed with anemia, and consultation was requested from other branches for 9.7%. In our study, 21.6% of the patients were consulted to other branches, Şensoy et al. (14) specified that 80.8% of the cases had applied to the relevant unit only once, and this frequency was 71.2% in our study.

According to the data of the 2014 Health Statistics Yearbook, while the number of medical applications per capita to primary health care was 1.1 in 2002, it increased to 2.8 in 2014 and from 2.2 to 5.5 in the secondary and tertiary health care (15). In the study that they conducted in 245 families (601 individuals) in the family medicine polyclinic of a university hospital in 2009, Ünalan et al. (16) reported that the average number of polyclinic applications was 3.6 per capita, and the number of polyclinic applications per capita was found as 1.5±1.2 in our polyclinic. The fact that the average number of applications to our polyclinic per person was lower than that in the study by Ünalan et al. may have been caused by the locations of the institutions and the differences in the patient population that applied. In addition, patients may not have applied to family medicine polyclinics because they wanted to be examined in the polyclinics that provide secondary and tertiary care services.

When the family medicine data in the United States and Turkey were examined, it was observed that hypertension was the most commonly made diagnosis, and acute upper respiratory tract infection was within the first five complaints (16). Ünalan et al. (16) indicated the most frequently made diagnoses in their study as upper respiratory tract infections (19%), hypertension (14.3%), normal physical examination (11.9%), and dyslipidemia (9.8%). In the study that Heywood et al. (11) conducted in the patients who made the highest number of applications to the primary health care, the most common cause for application was cardiovascular diseases both in those with the highest number of applications and in the control group (49% and 39%, respectively). In the patient group that made frequent applications, 80% of the patients applied due to complaints of infectious diseases, 52% due to gastrointestinal system complaints, 41% due to skeletal muscle diseases, and 27% due to respiratory infections (11). In the study that Yılmaz et al. (9) conducted in 5690 patients, the most frequent diagnoses were upper respiratory tract infections (30.8%), hypertension (14.3%), and dorsalgia (5.7%), respectively.

The fact that the occupational diseases of the patients were not questioned in the sociodemographic data suggests that there may be a limitation on the counseling about preventive health services. We also think that the low number of children who applied to our outpatient clinic may have changed the distribution of age and diseases. Other limitations can be that our study was a retrospective, single-centered, and short-term study.

CONCLUSION

The health care provided by the family medicine polyclinic of a tertiary institution does not overlap with the service offered at family health centers. In terms of the training given about the follow-up and management of chronic diseases, vaccinations, child and pregnancy follow-up, depression, acute infections, and similar frequently encountered issues, which are among the services provided by the primary health care, it is important to provide an appropriate training environment during assistantship and to encourage continuous medical education activities in order to ensure quality primary care services. Conducting the study in more than one secondary and tertiary family medicine polyclinics may ensure more reliable results by providing the representation of a wider sociodemographic distribution.

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