



Impact of COVID-19 Pandemic on Family Medicine Clinical Practices During the Second Wave

COVID-19 Pandemisinin İkinci Dalga Sırasında Aile Hekimliği Klinik Uygulamalarına Etkisi

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Abstract

Aim: It is seen that there are various changes brought by the process within the legislation and in various practices in primary health care services in extraordinary health situations such as pandemics. In this study, it was aimed to determine the effects of the COVID-19 pandemic on some clinical practices of family physicians in Turkey.

Material and Method: The descriptive study was applied to family physicians working actively in family health centers between February 15, 2021 and April 1, 2021. Family physicians working actively in family health centers formed the universe. Physicians were asked through online-survey questions regarding specific follow-ups and changes they made in some clinical practices, the changes in the number of applications, and the arrangements they made in this regard.

Results: 912 people participated in the study. 59.9% were male, 60.2% had been practicing family medicine for more than 10 years. 63.9% had PCR test and 26.8% had antibody test. 16.1% were diagnosed with COVID-19. 84% of them went to Family Health Center (FHC) every day during the pandemic. While 48.2% of them were doing triage, 53.6% of the participants stated that the number of applications decreased. 65.2% of them did their pregnant-baby-child follow-ups during the COVID-19 pandemic as before the pandemic, 24.7% carried out by appointment. 54.3% made a change in the FHC layout and terms. 50.2% stated that they did not follow up on chronic diseases during the COVID-19 period, 59.2% stated that there was a decrease in the number. 66.7% of them made their childhood vaccinations during the COVID-19 pandemic as before the pandemic, 24.7% carried out by appointment, and the number of applications for 73.6% did not change. 63.6% of them made adult vaccines during the COVID-19 pandemic as before the pandemic, the number of applications increased by 58.2%, and 73% were encouraging individuals. The number of those who came for general health status reports (driver's license, mental ability, job security, etc.) did not change by 53%, but increased by 23.6%.

Conclusion: The pandemic period has caused serious changes in family medicine clinical practices; family physicians have made various arrangements to carry out their current work in this period and have made an effort to convey this situation to the public.

Keywords: COVID-19 pandemic, family physicians, clinical practices

Öz

Amaç: Pandemi gibi olağanüstü sağlık durumlarında birinci basamak sağlık hizmetlerinde mevzuat ve çeşitli uygulamalarda sürecin getirdiği çeşitli değişiklikler olduğu görülmektedir. Bu çalışmada, COVID-19 pandemisinin Türkiye'deki aile hekimlerinin bazı klinik uygulamalarına etkilerinin belirlenmesi amaçlanmıştır.

Gereç ve Yöntem: Tanımlayıcı tipteki araştırma, 15 Şubat 2021-1 Nisan 2021 tarihleri arasında aile sağlığı merkezlerinde aktif olarak görev yapan aile hekimlerine uygulandı. Evreni, aile sağlığı merkezlerinde aktif olarak görev yapan aile hekimleri oluşturdu. Hekimlere spesifik takipler ve bazı klinik uygulamalarda yaptıkları değişiklikler, başvuru sayısındaki değişiklikler ve bu konuda yaptıkları düzenlemeler online anket soruları ile sorulmuştur.

Bulgular: Çalışmaya 912 kişi katıldı. %59,9'u erkekti, %60,2'si 10 yıldan uzun süredir aile hekimliği yapıyordu. %63,9'unda PCR testi, %26,8'inde antikor testi vardı. %16,1'ine COVID-19 teşhisi kondu. Bunların %84'ü pandemi süresince her gün Aile Sağlığı Merkezi'ne (ASM) gitti. Katılımcıların %48,2'si triyaj yaparken, %53,6'sı başvuru sayısının azaldığını belirtti. %65,2'si gebe-bebek-çocuk takiplerini pandemi öncesinde olduğu gibi COVID-19 pandemisi sırasında, %24,7'si randevu ile gerçekleştirmiştir. %54,3'ü ASM düzeninde ve koşullarında değişiklik yaptı. %50,2'si COVID-19 döneminde kronik hastalık takibi yapmadığını, %59,2'si ise sayısında azalma olduğunu belirtti. %66,7'si çocukluk aşılarını pandemi öncesinde olduğu gibi COVID-19 salgını sırasında yaptırmış, %24,7'si randevu ile yaptırmış, %73,6'sı için başvuru sayısı değişmemiştir. Pandemi öncesinde olduğu gibi COVID-19 pandemisinde de %63,6'sı erişkin aşılarını yaptırırken, başvuru sayısı %58,2 arttı ve %73'ü bireyleri teşvik ediyordu. Genel sağlık durum raporu (sürücü ehliyeti, akli ehliyet, iş güvenliği vb.) için gelenlerin sayısı %53 değişmeyerek %23,6 arttı.

Sonuç: Pandemi dönemi aile hekimliği klinik uygulamalarında ciddi değişikliklere neden olmuş; aile hekimleri bu dönemde mevcut işlerini yürütmek için çeşitli düzenlemeler yapmışlar ve bu durumu topluma aktarmak için çaba sarf etmişlerdir.

Anahtar Kelimeler: COVID-19 pandemi, aile hekimleri, klinik uygulamalar



INTRODUCTION

Family Health Centers (FHC) are the first step of health services in the health system. Family Health Centers have an important place in general health services due to their easy accessibility and faster delivery of services compared to other health units. Even in extraordinary health situations such as a pandemic, primary health care services are at the forefront of the fight against the epidemic. It is not possible to control and manage a pandemic in a healthy and correct manner without the effective and correct participation of primary health care services.^[1] In the studies, it was stated that the task scheme of family physicians was clearly defined in pandemic plans and the COVID-19 pandemic was better managed in countries where primary health care services are strongly structured.^[2-6]

The COVID-19 pandemic has caused various changes in the structuring of all health services. During some periods of the pandemic, elective operations were suspended in hospitals, and the number of patients in outpatient clinics was restricted.^[7]

It is seen that there are various changes brought by the process within the legislation and in various practices in primary health care services in extraordinary health situations such as pandemics.^[3-5] Primary health care has its own department at national level and is financed through a budget within the Ministry of Health in Turkey. Family health centers are institutions where primary care diagnosis, treatment and rehabilitative health services are provided as well as personal preventive health services. In addition to baby, child and adolescent follow-up, pregnant, 15-49 age follow-up, chronic disease follow-up, immunization services, presentation of various health reports are the main clinical services carried out in the family health center. Various practices have been planned by the state for the provision of these services during the pandemic period. The main of these are the provision of the prescribed drugs of people with chronic diseases directly from the pharmacy, and the monitoring of patients from home with the telemedicine method.^[8] No study has been found in which both the pandemic conditions and the effects of various regulations that may affect the current service delivery on the applications made for clinical services in family health centers and the regulations made by family physicians in this regard have been evaluated. Knowing how these services are affected by pandemic conditions and evaluating the arrangements made by family physicians in their own clinical practices in this regard can provide important information in the action plan to be created for future pandemics. With this study, it was aimed to evaluate the thoughts and attitudes of family physicians about the effects of the COVID-19 pandemic on clinical practices, the status of specific follow-up applications, and the regulations they have made on clinical practices in primary health care services in Turkey.

METHOD

The descriptive study was conducted between 15 February 2021 and 1 April 2021. The universe of the study consisted of family physicians who actively work in family health centers and were members of the Family Medicine Federation (FMF). FMF is a federation that gathers voluntary family physicians in Turkey under one roof through their associations. FMF has a total of 73 provincial associations and approximately 17 thousand members. The sample size was calculated as 376 when calculated with 5% margin of error and 95% confidence interval. Physicians who did not work before pandemic in FHC were excluded from study.

For the study, ethical committee approval was obtained from Hacettepe University Faculty of Medicine Non-Invasive Clinical Research Ethics Committee (Date:15.12.2020, Project no: GO20/1190).

The participants were asked questions about age, gender, years of working in family medicine, as well as the status of having COVID-19 infection. Physicians were asked through survey questions regarding specific follow-ups and changes they made in some clinical practices, the changes in the number of applications, and the arrangements they made in this regard.

A total of 31 questions were submitted online. The survey was developed by detailed literature research and observation of the national primary care guidelines for routine clinical practices. The electronic questionnaire form (Google Form) was sent to the family physicians who were active in family health centers and who were members of the Family Medicine Federation (FMF), via e-mail and social media (whatsapp and facebook websites of FMF).

SPSS 23.0 analysis program was used to evaluate the data. Descriptive statistics were presented as mean (\pm) standard deviation, median (min-max), frequency distribution, and percentage. Chi-Square Test or Fisher's Exact Test was used to compare categorical variables. When a significant difference was detected in comparisons with more than 2 categories for at least one variable (comparisons other than 2x2), the groups were compared in pairs to determine the source of the difference, and Bonferroni correction was applied to identify the groups with a difference. Conformity of continuous variables to normal distribution was examined using visual (histogram and probability graphs) and analytical methods (if $n \geq 50$; Kolmogorov-Smirnov Test, if $n < 50$; Shapiro-Wilk Test). For the variable found to fit the normal distribution; Student T Test was used for statistical significance between two independent groups. One-Way ANOVA was used as a statistical method among three or more independent groups found to have a normal distribution. Tukey or Tamhane's T2 test results were used according to the homogeneity of the variances of the groups in post hoc multiple comparisons to determine the source of the significant differences between three or more independent groups. Statistical significance level was accepted as $p < 0.05$.

RESULTS

913 people participated in the study. 59.9% (n=546) of the participants were male and 40.1% (n=367) of them were female. The mean age of the participants was 44.31±8.92 (min=26; max=68). While 60.1% (n=549) of family physicians have been practicing family medicine for more than 10 years, 20.3% (n=185) for 6-10 years, 17.5% (n=160) has been working as a family physician for 1-5 years.

Table 1. Sociodemographic characteristics of family physicians

	%	n		
Sex				
Female	40.1	367		
Male	59.9	546		
The working duration as a family physician				
Between 1-5 years	19.6	179		
Between 6-10 years	20.3	185		
More than 10 years	60.1	549		
Regions of the Country				
Marmara Region	13.4	123		
Black Sea Region	9.4	85		
Aegean Region	12.9	118		
Mediterranean Region	13.5	123		
Central Anatolia Region	32.4	296		
Eastern Anatolia Region	10.3	94		
Southeastern Anatolia Region	8.1	74		
	Mean	SD	Min	Max
Age	44.31	8.92	26	68

64% (n=584) of the participants had PCR test for COVID-19 infection, 26.8% (n=245) had done antibody test. 16.1% (n=147) were diagnosed with COVID-19 infection, 23.1% (n=211) remained in quarantine. 67.8% (n=619) had a history of contact with someone with a diagnosis of COVID-19.

While 53.8% (n=489) had registered patients of 3500 and above, 38.3% (n=348) had registered patients between 2000-3500.

During the COVID-19 period, 84% (n=767) stated that they worked in the same way as in the pre-pandemic period and went to the FHC every day for outpatient services, 12.6% (n=115) stated that they worked flexibly.

86.4% (n=789) of family physicians stated that they admitted patients without an appointment during the pandemic period, and 10.7% (n=98) stated that they sometimes took patients with an appointment. 43.6% (n=398) of them stated that they performed triage at admissions during the pandemic. 53.6% stated that the number of visits decreased during this period, while 27.5% stated that they increased.

The views of family physicians on the change in the number of visits and the number of special follow-up visits during the second wave of the COVID-19 pandemic are given in **Table 2**.

Table 2. Views of family physicians on the change in the number of visits and the number of special follow-up visits during the second wave of the COVID-19 pandemic

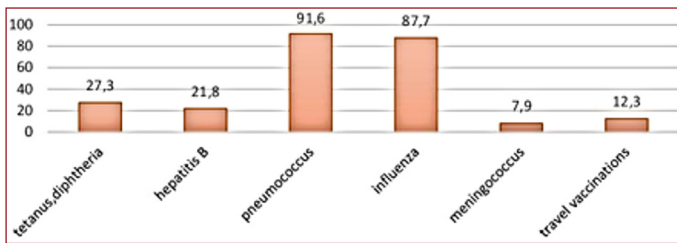
During the second wave of the COVID-19 pandemic;	Increased		Decreased		Not changed	
	n	%	N	%	n	%
Change status in primary care visit numbers	251	27.5	489	53.6	173	18.9
Change status in the number of those who come for pregnant-baby-child follow-ups	27	3.0	321	35.2	565	61.9
Change status in the number of those who come for chronic disease follow-ups	74	8.1	540	59.1	299	32.7
Change status in the number of people coming for childhood vaccination	122	13.4	119	13.0	672	73.6
Change status in the number of arrivals for adult vaccines	532	58.3	139	15.2	242	26.5
Change status in the number of visitors for general health status reports (driver's license, mental ability, job security, etc.)	215	23.5	215	23.5	483	52.9

Of the family physicians 1.9% stated that there was no change in the number of those who came for pregnant-baby-child follow-up. 65.2% (n=595) stated that they were doing their pregnant baby-child follow-ups as before the pandemic, 24.6% (n=225) by appointment, 6.4% (n=58) by telephone. 54.2% (n=495) reported that they made changes in the FHC system for pregnant-baby-child follow-ups, and 67% (n=612) reported that they had to explain the precautions they took to come to pregnant-baby-child follow-ups.

59.1% of family physicians stated that the number of people who applied for chronic disease follow-ups decreased. 50.3% (n=459) of family physicians reported that they did not follow up on chronic diseases, 29.6% (n=270) reported that they did it as before the pandemic, and 10.4% (n=95) carried out by telephone. 44.5% (n=406) reported that they had to tell the patients about the precautions they took to follow up for chronic disease.

73.6% of family physicians stated that the number of people applying for childhood vaccination did not change. 66.7% (n=609) of family physicians reported that they administered childhood vaccinations as before the pandemic, while 31.9% (n=291) reported that they carried out by appointment. 62.4% (n=570) reported that they had to explain the precautions they took to bring their children to have childhood vaccinations.

58.3% of family physicians stated that the number of people applying for adult vaccination has increased. 63.6% (n=581) of the family physicians reported that they performed adult vaccinations as before the pandemic, while 34.8% (n=318) reported that they carried out by appointment. 73.1% (n=667) reported that they encouraged their patients for adult vaccination. Graphic of recommended vaccines by family physicians is presented in **Graphic 1**.



Graphic 1. Recommended vaccines during pandemic by family physicians

52.9% of family physicians stated that the number of those who came for general health status reports (license, mental ability, job security, etc.) did not change. 92.9% (n=848) of family physicians reported that they did not find it appropriate to prescribe medication or issue a report to a patient they did not see, and 68% (n=621) reported that they looked at the legislation on prescribing medication or issuing a report.

The relationship between sociodemographic features (age, sex, year in profession) and views of family physicians' about clinical practices were evaluated. There was a relationship between gender and triage practices, women physicians did triage much more than men ($p=0.004$). There was a relationship between gender and practice types of pregnant-baby-adolescent follow-up, chronic disease follow-up; women did telephone consultation more than men ($p=0.032$; $p<0.001$).

DISCUSSION

The current study found that family physicians' clinical practices were variably affected since the COVID-19 pandemic during second wave. Nearly half of them mentioned that the total number of applications decreased during this period. It has been reported in different studies from Turkey that there has been a decrease in applications to primary health care institutions during the pandemic period.^[9,10] According to a field study conducted by Turkish Medical Association, it has been reported that a decrease in the number of patients coming for both analysis and cancer screening in 93% of FHCs.^[11] In international studies, in accordance with our study, the decreased applications numbers and a dramatic shift to telehealth visits were mentioned.^[12-18] Prolonging the reporting period of the drugs supplied by the Ministry of Health and ensuring that they can be obtained from pharmacies without the necessity of a prescription might be reduced the number of examinations in our country. Also, the number of telephone consultations were not high much as other countries, but in all type of practices, a little part of family physicians stated about it.

According to a guideline developed by Turkish Medical Association, triage was suggested in primary health care centers.^[19] Triage means that every patient contacting the practice first provides some information on the reasons for contact and is triaged before making an appointment.^[20] In our study, the biggest part of participants stated that they

admitted patients without an appointment and 43.6% of them stated that they performed triage at admissions during the pandemic. In the first wave of COVID-19 pandemic, the triage was used much more than second wave, because with the time, this new disease better known by public and by health personals.^[8,16,20]

During the COVID-19 period, the biggest part of the family physicians stated that they worked in the same way as in the pre-pandemic period and went to the FHC every day for outpatient services. In literature, especially in developed countries, the teleconsultation rates were stated as increased,^[17-22] and with teleconsultation, some physicians worked home-office during pandemic. In our country the teleconsultation could not be used effectively by physicians because of legal issues and infrastructural problems.^[23] So the working type could not be changed. In our study we found that, women physicians did triage and telephone consultation much more than men. We did not examine about reasons of these results in our survey. Maybe new researches will be planned in this context.

Biggest part of participants said that applications for chronic disease follow-ups were decreased, half of family physicians reported that they did not do chronic disease-follow up, and 10.4% carried out by telephone. According to a field study conducted by Turkish Medical Association, it has been reported that a decrease in admissions for chronic diseases was observed in 51% of the patients.^[11] Prolonging the reporting period of the drugs supplied by the Ministry of Health and ensuring that they can be obtained from pharmacies without the necessity of a prescription might be reduced the number of examinations in our country. Another reason could be that from the beginning of the pandemic, the negative effect of COVID-19 on people with chronic disease was emphasized and people could be afraid from transmission of virus.

In Turkey, it has been suggested by ministry of health that the preventive health services (vaccination, infant-child follow-up, pregnant follow-up) continued in the same way in terms of the continuity of public health.^[10] In accordance with this suggestion, in our study, physicians mentioned that applications for pregnant-baby-child follow-ups and childhood vaccination were not changed. Family physicians mentioned that they were doing their pregnant baby-child follow-ups as before the pandemic, however nearly half of them reported that they made changes in the FHC system for pregnant-baby-child follow-ups. Considering the literature, in a study conducted by Muhaidat et al. in Jordan, the rate of receiving antenatal care service in the pandemic period was decreased.^[24] Like our study, in study of Esmeray et al., it was mentioned that, within the scope of Covid-19 measures in FHC, patients and pregnant women enter from different doors in a way that they do not come into contact with each other.^[10] In this study, 66.7% of family physicians reported that they administered childhood vaccinations as before the pandemic,

while 31.9% reported that they carried out by appointment. According to data from 129 countries by UNICEF, 53% of countries reported moderate or severe disruptions in their vaccination programs.^[25]

Adult vaccination applications were mentioned as increased. One third of them reported that they carried out by appointment and 73.1% reported that they encouraged their patients for adult vaccination. Pneumococcus, influenza vaccination applications were highest rate according to family physicians.

It has been suggested by ministry of health, postponing medical reports other than marriage and military service reports were among the measures taken. In our study physicians stated that applications for general health status reports (driver's license, mental ability, job security, etc.) were not changed.^[9] Approximately half of family physicians stated that the number of those who came for general health status reports (license, mental ability, job security, etc.) did not change. Biggest part of them reported that they did not find it appropriate to prescribe medication or issue a report to a patient they did not see, and 68% reported that they looked at the legislation on prescribing medication or issuing a report. In a study conducted by Esmeray and colleagues, the rate of driver's license examinations decreased (18.2%), while the rates of marriage (48.7%), military service (1.8%) and single physician report (31.3%) increased during pandemic.^[10] According to a field study conducted by Turkish Medical Association, it has been reported that a decrease in applications for medical reports in 70% of the patients.^[11]

In this study, the convenience sample was used and thus results of generalizability may be limited. The study was a cross-sectional study, in the future studies, should be employed a longitudinal design to confirm the findings and investigate the causality of relationships.

CONCLUSION

The pandemic period has caused serious changes in family medicine clinical practices, family physicians have made various arrangements to carry out their current work during this period and have made an effort to convey this situation to the public.

ETHICAL DECLARATIONS

Ethics Committee Approval: The study was carried out with the permission of Hacettepe University Faculty of Medicine Non-Invasive Clinical Research Ethics Committee (Date:15.12.2020, Project no: GO20/1190).

Informed Consent: Because the study was designed retrospectively, no written informed consent form was obtained from patients.

Referee Evaluation Process: Externally peer-reviewed.

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