Review

DOI: 10.14235/bas.galenos.2021.6186
Bezmialem Science 2022;10(2):242-6

Pharmaceutical Care Services During the COVID-19 Pandemic in Turkey: Proposal of a Holistic Approach

COVID-19 Pandemisinde Türkiye'deki Farmasötik Bakım Hizmetleri: Bütüncül Bir Yaklaşım Önerisi

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ABSTRACT

Community pharmacists, who are among the primary healthcare service providers, are regarded as the closest and most accessible healthcare professionals. Unfortunately, patient counseling, one of the most important pharmacy profession tasks, cannot be performed in exceptional cases, which can endanger patient safety. The coronavirus disease-19 (COVID-19) pandemic process we are facing today is an example of these particular situations in Turkey. Partial curfews imposed within the scope of COVID-19 pandemic measures have also increased problems. Therefore, there is a need for a pharmaceutical care service network that will enable individuals who do not have access to pharmacies, who are in risk groups, or whose mobility is restricted due to pandemic or disaster, to reach their prescribed medicines safely under pharmacist consultancy. In this regard, establishing a pharmaceutical care service network on a scientific and systematic basis may solve the current problems, mostly encountered during the COVID-19 pandemic in Turkey. Designing a network within the framework of vehicle routing and assignment problems is important in ensuring patients' rapid access to prescribed medications and preventing unfair competition among pharmacies.

Keywords: COVID-19, community pharmacists, telehealth

ÖZ

Birinci basamak sağlık hizmeti sunucuları arasında yer alan eczane eczacıları, en yakın ve en erişilebilir sağlık çalışanları olarak kabul edilmektedir. Eczacılık mesleğinin en önemli görevlerinden biri olan hasta danışmanlığı maalesef hasta güvenliğini tehlikeye atabilecek istisnai durumlarda yapılamamaktadır. Bugün karşı karşıya olduğumuz koronavirüs hastalığı-19 (COVID-19) salgın süreci, Türkiye'deki bu özel durumların bir örneğidir. Koronavirüs pandemi önlemleri kapsamında uygulanan kısmi sokağa çıkma yasakları da karşılaşılan bu sorunları artırmıştır. Bu nedenle eczanelere erişimi olmayan, risk grubunda bulunan, salgın veya afet nedeniyle hareket kabiliyeti kısıtlanan bireylerin reçeteli ilaçlarına eczacı danışmanlığında güvenle ulaşmasını sağlayacak bir farmasötik bakım hizmet ağına ihtiyaç duyulmaktadır. Bu bakımdan bilimsel ve sistematik bir temelde farmasötik bakım hizmet ağı kurmak, Türkiye'de özellikle COVID-19 salgını sırasında karşılaşılan güncel sorunları çözebilir. Araç rotalama ve atama problemleri çerçevesinde bir ağ tasarlamak, hastaların reçeteli ilaçlara hızlı erişimini sağlamak ve eczaneler arasında haksız rekabeti önlemek açısından önem arz etmektedir.

Anahtar Sözcükler: COVID-19, eczane eczacıları, telesağlık

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Received: 09.03.2021
Accepted: 17.06.2021

Cite this article as: Arslan M, Akbal Dağıstan Ö, Şar S. Pharmaceutical Care Services During the COVID-19 Pandemic in Turkey: Proposal of a Holistic Approach. Bezmialem Science 2022;10(2):242-6

Introduction

Pharmacists, who are primary health care providers, are regarded as the closest and most accessible healthcare professionals all around the world. In terms of public health, especially community pharmacists, hospital pharmacists, and clinical pharmacists come to the fore. There are different pharmacy specialties in many different countries, such as clinical pharmacy, family pharmacy, intensive care pharmacy, home care pharmacy, and disaster pharmacy. Among these specialties, family pharmacy and home care pharmacy gain more importance in terms of continuous and controlled follow-up of patients' drug treatment processes.

In the literature, many studies are revealing the pharmacist's necessity to provide drug consultancy service. Triller et al. (1) found that the home care pharmacy program positively affected patient outcomes. Walus and Woloschuk (2) conducted a pilot application in an ongoing home care practice that included home visits, training, information transmits via telephone, and recording patient data in a database. As a result of a survey conducted with pharmacists participating in this practice, several non-negligible pharmacists need to be observed. Pharmacists are included in the ongoing practice through a private insurance company. It was stated that it would be beneficial for pharmacists to expand and maintain this practice. Dilks et al. (3) revealed that the provision of pharmacy services at home increased patient safety, especially for the elderly, improves patients' quality of life, and reduced health expenditures. In addition to home health care services, telepharmacy applications, which are legally carried out in many countries as a product of constantly developing technologies, also come to the fore in pharmacist-patient counseling. Poudel and Nissen (4) stated that telepharmacy practices carried out within the legal rules framework would contribute to the management of drug treatment processes and access to drug and drug information for patients who could not access pharmacist counseling due to geological or demographic constraints. The fact that the United States e-commerce company Amazon, which has attracted considerable attention and discussed recently, has started to offer online pharmacy services in the USA, is an important example that should be addressed in terms of telepharmacy services. Especially during the COVID-19 pandemic, it is seen that telepharmacy services have increased in many countries. Margusino-Framiñán et al. (5) stated in the study they conducted in Spain that the telepharmacy services offered during the COVID-19 pandemic would optimize clinical outcomes and reduce transmission risk. Tortajada-Goitia et al. (6) applied a questionnaire to pharmacists to evaluate hospital pharmacies' telepharmacy services during the COVID-19 pandemic in Spain. They found that the telepharmacy services provided the continuity of many patients' health care in this process (6). Ibrahim et al. (7) put forth that telepharmacy increased the rate of patients' access to pharmaceutical care services and reduced the likelihood of drug-related side effects during the COVID-19 pandemic in the United Arab Emirates.

The World Health Organization also sees digital health solutions as one of the most promising approaches to the COVID-19 pandemic; such as mobile applications used for contact tracing to monitor the outbreak and used to deliver and gather instant information or online tools to provide medical consultancy (8). Besides, the International Pharmaceutical Federation (FIP) has published a "Call to Action" on 16.04.2020 to support pharmacists and pharmacy workers who are at the frontline of the fight against coronavirus/COVID-19. In this call, the points where pharmacists can play an active role in the management of the pandemic process have been put forward such as: (i) *Providing logistical and financial support for home delivery of medicines and medical devices by pharmacists, especially to high-risk groups, such as older adults, patients with non-communicable diseases and patients with immunocompromising conditions (congenital or acquired), who have been advised to stay at home. This can be done in partnership with postal services or with other logistical partners*. (ii) *Allowing pharmacists and pharmacy staff to conduct routine pharmacy tasks remotely as necessary, including through telepharmacy consultations* (9).

Turkey at a Glance

When home care pharmacy services or telepharmacy services are evaluated in Turkey, it can be seen that there is a gap. In Turkey, homecare health services are provided by the Turkish Ministry of Health since 2005. The medicines required for the patient during the delivery of home healthcare services are covered by the service unit; however, pharmacists have not been included in these units (10). During the regular home visits, medications were prescribed to the patients benefiting from this service between 2012 and 2017 by 213,336 specialist physicians. However, the prescriptions were either delivered to the patients via their relatives or their neighbors who collected them through local pharmacies or home care service workers. Since these prescribed medicines could not be delivered directly from the pharmacist, patients used their medicines without a primary pharmacist consultation.

Many studies conducting in Turkey on home care services have discussed the drug-related problems that arise during the provision of these services. Aslan et al. (11) stated that problems such as complications due to misuse of medicines might occur during home healthcare services. Yeniçeri conducted a study with 255 volunteers over 65 years old who registered for home care services. It was found that the rate of polypharmacy in patients was 48.6%, and 53.4% had at least one inappropriate drug use. It was also revealed that the frequency of drug side effects and inappropriate drug use increased due to polypharmacy (12). Similarly, Sargın (13) conducted a study with 317 patients over 65 years old who registered for home care services. As a result, polypharmacy was detected in 54.9% of the participants, and 49.5% had at least one inappropriate drug use. Besides, the study showed that the prevalence of inappropriate drug use increased with polypharmacy (13).

In the light of this information, it is seen that drug-related problems are experienced in-home healthcare services in our country, and the role of pharmacists in this regard has started to attract attention. In extraordinary situations such as pandemic, natural disasters whereby patients have difficulty for accessing to

their medicines, these problems draw even more attention and the pharmaceutical care need arises (14).

As it is known, pharmacists play an active role in both drug and vaccine development studies and the protection of public health. Due to the legislation on pharmaceutical in Turkey, pharmacists should also take an active role in drug procurement processes in extraordinary situations and crisis periods (15). COVID-19 cases are gradually increasing in Turkey. In line with the Turkish Republic, Ministry of Health's data, the number of patients diagnosed with the COVID-19 in the country as of February 13, 2021, was 2,579,896 (16). This frame has made community pharmacies one of the health institutions with the highest patient traffic during the pandemic period. Not only meeting the prescriptions of patients diagnosed with COVID-19, but also the increase in demand for immune-boosting products, vitamins, personal protective equipment, and hygiene products significantly increased the demand for pharmacist consultancy (17).

Partial curfews imposed within the scope of COVID-19 pandemic measures have also caused problems in individuals' access to drugs and pharmacist counseling. Also, due to the quarantine process that COVID-19-positive patients must comply with, drug use cannot be provided under pharmacist consultation during their home treatment process. Along with lack of proper consultancy, high treatment doses of drugs used in COVID-19-positive patients according to diagnostic treatment guidelines, reduce patient compliance. For example, Favipiravir (only 200 mg tablet form markedly available in Turkey) should be used as 2x1,600 mg: 8 tablets in the morning and 8 tablets in the evening for the loading dose for the first 2 days, followed by 2x600 mg as a maintenance dose (3 tablets in the morning and 3 tablets in the evening) (18). Unfortunately, most of the patients who receive treatment at home do not want to use this drug, which requires high doses, due to incorrect/inadequate information. This situation negatively affects the patient's compliance with the treatment, aggravates the clinical picture of the disease, and increases hospital re-/admissions and hospitalization rates. In this context, it is predicted that a system where direct pharmacist-patient communication is provided will be beneficial.

When the subject is handled from a different perspective, pharmacy visits of COVID-19 positive patients make community pharmacies areas with a high risk of contamination. It should also be noted that the first healthcare provider who died in our country due to COVID-19 was also a community pharmacist (Pharm. İhsan Giray). It was also known that there were 51 pharmacists and 19 pharmacy employees who died as of May 10, 2021, due to COVID-19 (16). Unfortunately, many pharmacists and pharmacy workers continue to get infected by COVID-19.

The filiation technique is used in Turkey to screen the chain of contacts in COVID-19. Patients who are tested positive for COVID-19 and their close contacts are visited by filiation teams consisting of three members (physician, health professional, and assistant personnel) appointed by the Turkish Ministry of Health (16). These teams give the first prescriptions of these patients created by the patient's family physician to them at their home. However, since all of these groups do not include pharmacists, these quarantined patients have problems in the follow-up of their medication therapy and access to medicines.

According to the pharmaceutical legislation in Turkey, FIP's aforementioned advice, related to COVID-19 practice implementation focused on the delivery of medicines to the patient residences, is not legal. However, it is a known fact that home delivery of medicine and over the counter products, is an uncontrolled issue during this pandemic period (9,19). Illegal pharmaceutical couriers who are not even a healthcare professional or who do not work in the health sector draw attention at this point. Inevitably, the delivery of drugs to patients by such couriers who have no expertise in drugs, will negatively affect patients' treatment process. Additionally, with the circular issued during the COVID-19 pandemic period, the Vefa Coordination Group was established under government control to meet citizens' basic needs who were not able to go out due to various reasons such as an ongoing lockdown or heath related issues and did not have anyone to meet their needs (16). Obviously, this practice allows that specified group of patients to have access to their medical needs in terms of medications, over-the-counter products etc. Still, the fact that pharmacist consultancy cannot be obtained in this practice also paves the way for the negativities due to incorrect/non-rational use of drugs. Another shortcoming in the current operation is that there is unfair competition among pharmacies, as there is no systematic appointment and distribution strategy for pharmacies where needs are met.

Proposed Approach; Establishment of a Pharmaceutical Care Service Network

During the COVID-19 pandemic process, the Turkish Ministry of Health has put into a telehealth service project that includes medical consultations, clinical diagnosis, and health service delivery. Within the scope of the project, which has started to be piloted in five cities, people who should be in quarantine can make an appointment through the Central Physician Appointment System, talk to physicians by online communication tools such as video conference, and receive their prescriptions via SMS. This system emphasized the importance of digital applications during extraordinary situations such as the pandemic period (16). Therefore, in parallel with this running project, it is thought that with an integrated system approach comprising the teleconsultation services by pharmacists, patient safety can be ensured by both the safe access of the patients to the medicines and the continuous patient counseling. Also, Aysu and Rabuş (20) emphasized the importance of such systems in the COVID-19 pandemic for the sustainability of pharmaceutical care.

In this regard, establishing a pharmaceutical care service network on a scientific and systematic basis may be a solution for the current problems, mostly encountered during the COVID-19 pandemic in Turkey. Designing a network within the framework of vehicle routing and assignment problems is important in

ensuring rapid access of patients to prescribed medications and preventing unfair competition among pharmacies. Providing such a holistic system that facilitates the access of individuals to their prescription medicines under pharmacist consultancy offers solutions from various perspectives including minimizing the drug-related problems that can be encountered at home health care services, increasing success of drug treatment and patient compliance, and reducing the health expenses of patients caused by non-rational use of drugs.

By integrating such a holistic approach to the healthcare system, pharmaceutical care services can reach to patients in extraordinary situations such as pandemics or natural disasters and in particular rural areas that cannot make any personal contact with a pharmacist directly. Thus, pharmaceutical care services' sustainability will be ensured under all conditions. From a different perspective, implementing such a system, especially in delivering pharmaceutical services in developing countries will also help achieve some of the FIP Development Goals to transform global pharmacy such as Goal 18: Access to medicines, devices & services, Goal 19: Patient safety, and Goal 20: Digital health (21).

The study's main purpose is to evaluate the problems experienced in accessing drugs in Turkey, especially during the COVID-19 pandemic process, and offering a solution. With this study, the need for online, legal, and reliable pharmacy systems to provide solutions to the problems experienced by individuals in accessing their prescribed medicines in such extraordinary conditions is put forth.

The authors also want to emphasize that they have started a project on this subject with a specialized working group within the scope of digital health applications. Therefore, the information presented in this study is one of the milestones of the relevant project.

Peer-review: Externally peer reviewed.

Authorship Contributions

Concept: M.A., Ö.A.D., S.Ş., Design: M.A., Ö.A.D., S.Ş., Literature Search: M.A., Ö.A.D., Writing: M.A., Ö.A.D.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

References

1. Triller DM, Hamilton RA, Briceland LL, Waite NM, Audette CM, Furman CA. Home care pharmacy: extending clinical pharmacy services beyond infusion therapy. Am J Health Syst Pharm 2000;57:1326-31.
2. Walus AN, Woloschuk DM. Impact of pharmacists in a community-based home care service: a pilot program. Can J Hosp Pharm 2017;70:435-42.
3. Dilks S, Emblin K, Nash I, Jefferies S. Pharmacy at home: service for frail older patients demonstrates medicines risk reduction and admission avoidance. Evaluation. 2020;14:34.
4. Poudel A, Nissen LM. Telepharmacy: a pharmacist's perspective on the clinical benefits and challenges. Integr Pharm Res Pract 2016;5:75-82.
5. Margusino-Framiñán L, Illarro-Uranga A, Lorenzo-Lorenzo K, Monte-Boquet E, Márquez-Saavedra E, Fernández-Bargiela N, et al. Pharmaceutical care to hospital outpatients during the COVID-19 pandemic. Telepharmacy. Farm Hosp 2020;44:61-5.
6. Tortajada-Goitia B, Morillo-Verdugo R, Margusino-Framiñán L, Marcos JA, Fernández-Llamazares CM. Survey on the situation of telepharmacy as applied to the outpatient care in hospital pharmacy departments in Spain during the COVID-19 pandemic. Farm Hosp 2020;44:135-40.
7. Ibrahim OM, Ibrahim RM, Z Al Meslamani A, Al Mazrouei N. Role of telepharmacy in pharmacist counselling to coronavirus disease 2019 patients and medication dispensing errors. J Telemed Telecare 2020;1357633X20964347.
8. Coronavirus disease (COVID-19) pandemic. [cited 2021 Jan]. https://www.who.int/emergencies/diseases/novel-coronavirus-2019
9. FIP Call to Action: To support pharmacists and pharmacy workers on the coronavirus/COVID-19 frontline. [cited 2021 Jan]. https://www.fip.org/files/content/publications/2020/FIP-call-to-action-to-support-pharmacists-and-pharmacy-workers-on-the-coronavirus-COVID-19-frontline.pdf
10. Republic of Turkey Offical Gazette. Offical Gazette Date 27.02.2015, Offical Gazette Number: 29280. "Sağlık Bakanlığı Ve Bağlı Kuruluşları Tarafından Evde Sağlık Hizmetlerinin Sunulmasına Dair Yönetmelik." [cited 2021 Jan]. https://www.resmigazete.gov.tr/eskiler/2015/02/20150227-14.htm
11. Aslan Ş, Uyar, S, Güzel Ş. Home health care services practince in Turkey. Journal of Social Research and Management 2018;1:45-56.
12. Yeniçeri EN. Evaluation of polypharmacy and improper drug use in patients at age 65 and over that registered with home health services unit. [Dissertation thesis]. Muğla, Turkey: Muğla Sıtkı Koçman University; 2016. https://acikbilim.yok.gov.tr/bitstream/handle/20.500.12812/213369/yokAcikBilim_10132934.pdf?sequence=-1&isAllowed=y
13. Sargın Ö. Evaluation of inapropriate medication use and falls in 65 years and older home care patients. [Dissertation thesis]. Ankara, Turkey: Turkish Health Sciences University; 2018.
14. Watson KE, Van Haaften D, Horon K, Tsuyuki RT. The evolution of pharmacists' roles in disasters, from logistics to assessing and prescribing. Can Pharm J (Ott) 2020;153:129-31.
15. The Presidency of Republic of Turkey Legislation Information Page. Offical Gazette Date 12.04.2014 Offical Gazette Number 28970. "Eczacılar ve Eczaneler Hakkında Yönetmelik." [cited 2021 Feb]. https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=19569&MevzuatTur=7&MevzuatTertip=5
16. Republic of Turkey Ministry Covid-19 Information Page. [cited 2021 Feb]. https://covid19.saglik.gov.tr/?_Dil=2
17. Koçberber EK, Rabuş Ş. COVID-19 ve gıda takviyeleri. In: Rabuş Ş, editor. C-19 Diken Üstünde Eczacılık. Türk Eczacıları Birliği: Ankara; 2021. P. 105-129.

18. Republic of Turkey Ministry of Health Covid-19 Information Page. [cited 2021 Feb]. https://covid19.saglik.gov.tr/TR-66301/covid-19-rehberi.html

19. The Presidency of Republic of Turkey Legislation Information Page. Offical Gazette Date 24.12.1953 Offical Gazette Number: 8591. Kanun Numarası: 6197. "Eczacılar ve Eczaneler Hakkında Kanun." [cited 2020 Dec]. https://www.mevzuat.gov.tr/MevzuatMetin/1.3.6197.pdf

20. Aysu S, Rabuş Ş. Dijital Sağlık Uygulamaları ve Covid-19 Pandemisi. In: Şule Rabuş, ed. C-19 Diken Üstünde Eczacılık. Ankara, Türk Eczacıları Birliği Yayınları; 2020:139-146.

21. International Pharmaceutical Federation (FIP). The FIP Development Goals: Transforming global pharmacy. The Hague: International Pharmaceutical Federation; 2020.