

# HOMECARE SERVICES FOR THE ELDERLY: TURKEY'S PERSPECTIVE

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## ABSTRACT

Homecare is a service that provides examination, observation, treatment, medical care and rehabilitation to the individuals in need and also social and psychological support services to family members as a whole by a professional team.

The majority of these individuals in need of help are women over the age of 65. It has been suggested that patients with hypertension, diabetes, stroke, fracture, cancer, Alzheimer's disease, and joint and neurological disorders benefit the most from the services provided. Healthcare personnel mostly provide services in examination, medicine, injection, catheterization and wound care.

Homecare has no international standards and countries provide it in accordance with their own sociocultural standards. In world health report 2000 by World Health Organization, the care of people with long term health problems and in need of help in their daily life activities were emphasized.

Homecare is based on birth accompanied by midwives. Influenced by the care service a nurse gave to her husband at home, visiting nurse services were established by British anthropologist William Rathbone for patients with poor socioeconomic status. The Law on the Socialization of Health Services in Turkey was enacted in 1961. It was stated here that home healthcare is the responsibility of the public health nurse. The current directive entered into force in 2010. According to this; service can be provided by Family practice, home health service units established within hospitals, mobile teams of health directorates.

By providing health services at patients' homes, it becomes possible to facilitate the access to preventive health services, to reduce unnecessary hospital stay, to prevent hospital infections, and to be mentally peaceful at home. Considering the increasing need for home care, it is significant to address possible problems as soon as possible, to eliminate legal deficiencies, to ensure private and public cooperation, and to give responsibility to local governments.

**Keywords:** Home health services, homecare services, elderly, home care.

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## YAŞLI İÇİN EVDE BAKIM HİZMETLERİ: TÜRKİYE'NİN PERSPEKTİFİ

### ÖZET

Evde bakım; ihtiyaç sahibi bireylerin evde aile ortamında muayene, tetkik, tedavi, tıbbi bakım ve rehabilitasyonunu sağlayan, aile üyelerine bir bütün olarak sosyal ve psikolojik destek hizmetinin profesyonel bir ekiple verildiği bir hizmettir. Evde sağlık hizmetine ihtiyaç duyan bireylerin çoğunluğunu 65 yaş üstü kadınların oluşturduğu tespit edilmiştir. Verilen hizmetten en çok yararlananlar hipertansiyon, diyabet, inme, kırık, kanser, demans, eklem ve nörolojik rahatsızlıkları olan hastalardır. Sağlık personeli ise en çok muayene, ilaç, enjeksiyon, kateterizasyon ve yara bakımı konularında hizmet sunmaktadır.

Evde bakım uluslararası standardı olmayan, ülkelerin kendi sosyokültürel durumlarına göre standartlarını belirledikleri bir hizmettir. Dünya Sağlık Örgütü 2000 Yılı Raporu'nda, uzun süreli sağlık sorunları olan ve günlük yaşam aktivitelerinde yardıma ihtiyaç duyan insanların bakımı konusuna vurgu yapmıştır.

Tarihi açıdan evde bakım, ebelerin eşlik ettiği doğum hizmetlerine dayanmaktadır. Bir hemşirenin

kocasına evinde verdiği bakım hizmetinden etkilenen İngiliz antropolog William Rathbone tarafından sosyoekonomik durumu kötü hastalar için ziyaretçi hemşire servisleri oluşturulmuştur. Türkiye'de Sağlık Hizmetlerinin Sosyalleştirilmesine Dair Kanun 1961 yılında çıkarılmıştır. Burada evde sağlık hizmetinin halk sağlığı hemşiresinin sorumluluğunda olduğu belirtilmiştir. Güncel yönerge ise 2010 yılında yürürlüğe girmiştir. Buna göre Aile Hekimlikleri, hastaneler bünyesinde kurulan evde sağlık hizmet birimleri ve Sağlık Müdürlüklerinin gezici ekipleri tarafından hizmet verilebilmektedir.

Sağlık hizmetinin hastaların evinde sunulmasıyla, koruyucu sağlık hizmetlerine erişimin kolaylaştırılması, hastanelerde gereksiz yatış sürelerinin azaltılması, hastane infeksiyonlarının önlenmesi, evde zihinsel olarak huzurlu olunması sağlanabilmektedir. Artan evde bakım ihtiyacı da dikkate alınarak olası sorunların en kısa sürede ele alınmasının, yasal eksikliklerin giderilmesinin, özel ve kamu iş birliğinin sağlanmasının ve yerel yönetimlere sorumluluk verilmesinin önemi görülmektedir.

**Anahtar kelimeler:** Evde sağlık hizmeti, evde bakım hizmeti, yaşlı, evde sağlık.

### INTRODUCTION

With the advancement of technology and the development of early diagnosis and treatment services in the world day by day, the life expectancy of people have increased.<sup>1</sup> Accordingly, the incidence of chronic diseases is also increasing. Chronic diseases are defined as the conditions that are long-term and generally progress slowly, cannot be treated with medical interventions, require periodic follow-up in order to reduce the degree of the disease and maximize the individual's function and responsibility in self-care.<sup>2,3</sup> The situation of the elderly people and the problems they face in their quotidian life afterwards make it even more necessary to develop social policies and care models. Elderly individuals may have some difficulties while maintaining their lives and may need some assistance services. It is emphasized that the traditional health approach to deal with difficulties is insufficient, a change in perspective is needed here and primary health services should be based and restructured.<sup>4</sup> Moreover, nursing home, elderly care center, elderly club, elderly nursery, elderly apartment are the service models that include institutional care and are intended to support the elderly outside their

own environment. However, these services should be horizontally organized services that include team care. All over the world, the elderly need care models that support and help them in their own environment rather than institutional care. One of the most significant of these models is homecare service. Homecare service is a service in which examination, observation, analysis, treatment, medical care and rehabilitation can be provided in the individual's own home and also it provides social and psychological support services to family members as a whole.<sup>5</sup> In this text, we evaluated how the developments of homecare services in the world and in Turkey evolved and what are the positive and negative aspects of it and its possible future location.

The most common services provided by the World Health Organization (WHO) within the scope of homecare services within the framework of "Health for All in 2000" objectives are stated as follows:

- Evaluation, monitoring and re-evaluation: Firstly, the individual in need of care is evaluated by the evaluation team and the need for care is determined. Subsequently, the care team starts

monitoring the patient. The individual is followed by the care team at regular intervals. Afterwards, the evaluation team evaluates the development regarding the health status of the individual again. The process continues in this way until the patient no longer needs care.

- Health promotion and protection, prevention of secondary diseases and disability,
- Providing personal care (e.g feeding, bathing, dressing), mutual aid, self-defense,
- Medical and nursing care, housework service (cleaning, laundry, shopping),
- Arrangement of the environment in which the disabled live in order to meet their needs,
- Providing the possibility of referral and access to public facilities,
- Home rehabilitation service (physical, psychological and social),
- Meeting basic and special requirements, providing supportive tools, equipment and medicines,
- Special support services (such as incontinence, dementia and other mental problems),
- Services for resting the relatives by taking institutional care at regular intervals for the person in need of care, providing support to caregivers before, during and after the care (on subjects such as training, information, consultancy that will enable caregivers to provide better service)
- Palliative care (such as relief of pain and other symptoms),
- Counseling and emotional support,
- Increasing social interactions and developing informal relationships,
- Recreation studies,
- Providing physical activity opportunities,
- Preparing and mobilizing the community to take on a caring role: encouragement and encouragement of caregiving family relatives or caregivers to provide care.<sup>6</sup>

## **Home Health within the Scope of Home Care**

Home care and home health are the two parts of an inseparable whole. The concept of "home care" in the literature includes the concept of "home health". The concept of "home health care" can be opted instead of "home care" concept in different sources.<sup>7-9</sup> Home care is offered differently in various parts of the world, and the term "home care" has different meanings in many countries. On the other hand, countries have to design and develop appropriate home care guidelines and models for the good management of their health systems. Most developed countries have homecare service models designed in accordance with their demographic conditions, cultural contexts and the structure of health systems.<sup>10,11</sup>

The complexity of this concept is obvious in Turkey. The examination, observation, analysis, treatment, medical care, follow-up and rehabilitation services, including social and psychological counseling services at home and in the family environment, are defined as home health care services in the legislation.<sup>12,13</sup>

## **Historical Development in The World**

The historical development of home healthcare takes us to the births led by midwives.<sup>7</sup> Researches draw attention to the Roman Period, when there were debates about giving birth in home or hospital environment. In medieval Europe, homecare service used to be performed to prevent the spread of infectious diseases. The service provided, formed the basis of the "homecare service applications" to be implemented later. Since the middle of the 19<sup>th</sup> century, institutional structures have been established due to the increase of patients with low socioeconomic status and the inability of these patients to meet the hospital expenses. In the UK, trainings on this subject have been given and homecare services have initiated. The church pioneered homecare services and served voluntarily for many years. Therefore, homecare services, except for religious organizations, could not be provided until 1859. Removal of children and the elderly in need of care from the environment they lived together and taken to nursing homes was seen inappropriate during this period. The "visitor nursing service" within the scope of homecare services was created by William Rathbone (British Anthropologist) during this period. Rathbone created a voluntary visiting nurse service for patients with low socioeconomic status and was inspired by the care provided by a nurse at home for her husband.

Mary Robinson was the first nurse to provide home nursing services in Liverpool. Robinson's service was not limited to her profession, she also gave trainings about home hygiene rules and patient care. Florence Nightingale, one of the pioneers of homecare services, emphasized the importance of education in patient care as Mary Robinson did, and prepared projects for women receiving training to take part in hospitals and home visits. Based on the project presented by Nightingale, a school was opened in Liverpool in 1862 to provide nursing home care for nurses for 1.5 years.<sup>8</sup>

There is no international standard for homecare services, and these services are provided in accordance with the socio-cultural conditions of the countries.

Homecare services in Europe have been performed for years. Homecare services vary according to the cultural, socioeconomic and political structures of the countries in Europe. Traditionally, local authorities in England, Scotland, Wales and Northern Ireland have implemented a pricing policy for homecare services. Some services are offered free of charge, others at flat rates, but still the system is complex. For example, while homecare services are free in Scotland, they are charged in local regions of England.<sup>14,15</sup> In Italy, homecare services are actually offered as a public service. As a different practice, however, Lombardy Region has decided to offer home care funds in the form of coupons to the eligible ones. The coupon holder chooses among different accredited home care providers (public and private) and pays for the services with vouchers.<sup>15,16</sup> The Netherlands has developed a personal budget plan for homecare services. Personal budgets are allocated after the care needs of individuals are evaluated. Individuals can use this budget to purchase any services under social care insurance, including home care, from informal or formal sources. While home care is mostly provided by families in Eastern Europe, the government provides support with the red cross in Belarus and Ukraine.<sup>17</sup>

There are combined service models for seniors in Canada. These combined assistance models include personal care services, household chores and life management activities, medical and psychological assistance. Long-term studies are carried out to increase health and social care.<sup>18,19</sup> Especially in North America, there is an all-encompassing care program (PACE) and a health-social care program (HMO) for the elderly.<sup>20</sup>

The important factor behind homecare services in China is the social and cultural dynamics of the society. It is mostly family members offering homecare services. Although the fact that women take an active role in business life changes this situation slightly, the majority of families want to take care of their sick relatives. Family members are trained for homecare services. Homecare services are structured to be offered after a certain age (61 years) in the health system. In Australia, homecare services for extremely sick patients requiring long-term care are provided by unofficial caregivers supported financially.<sup>8,21</sup>

### **Historical Development in Turkey**

Homecare services in Turkey dates back to the Ottoman Empire. Especially after the period of Sultan Mehmet the Conqueror, the provision of homecare services has become more pronounced. In the past, 10 surgeons, 10 physicians, 3 wound dressers (nurses-health officers) had been assigned through the foundation built by Fatih Sultan Mehmet (The Conqueror). This team was said to have visited all houses in Istanbul on certain days of the week without an exception, met the treatment and care needs of the sick, and fulfilled the health needs that could not be done at home in the hospice (nursing home) without any charge.<sup>22</sup> Although homecare services in many countries started to be provided as a service by religious organizations in the literature, there has been no religious organizations in the historical development of homecare services in Turkey as an organizational service delivery.<sup>8</sup> According to the studies published in the Official Gazette between the years of 7<sup>th</sup> February, 1921 and 31<sup>st</sup> January, 2012, no occupational group was defined for the provision of services in the 50.4% of the legislation (n=62). When the profession group is specified in the relevant legislation, 55.7% of the legislation in which all healthcare personnel are concerned is for physicians. Therefore, healthcare service has been administered as physician-oriented in Turkey. This is different than the historical development of some European countries, and also than USA and Canada. In these countries, care practices are nurse-focused.<sup>23</sup> Homecare practice is not a new concept for the health care legislation of Turkey. However, despite being in the legislation, it could not be put into practice effectively. When this health legislation is evaluated as a whole, it is known that even though the mentality has been more of social preventive medicine from the first years of the Republic to the last quarter of the 20<sup>th</sup> century, therapeutic medicine and care plans has also been made. However, with the adoption of the concept of "health" defined as

the state of complete physical, mental and social well-being, the fact that human rights become effective in all communities, and the legislation put human rights at the center, the holistic approach in services has also been adopted. Establishing legislation by taking this approach into consideration maintains its importance in terms of access to more qualified service and right to health.<sup>24</sup>

In the Law No 224 of "Law on the Socialization of Health Services" issued in 1961 in Turkey, nurse is stated to be responsible for home health care.<sup>25</sup> In addition to this, The Directive No. 154 indicated that the responsibility of the care and monitoring of chronic diseases belong to health care centers.<sup>26</sup> An attempt was made to start the first project concerning care at home by the Social Services and Child Protection Agency General Directorate in the provinces of Ankara, Adana, Izmir and Istanbul in Turkey in 1993, however it could not be done because it cannot get effective results.<sup>23</sup> Subsequently, the Elderly Service Center, established only for the province of Ankara within the Ankara Metropolitan Municipality in 1994, and the Istanbul Health Corporation (Inc.), affiliated with the Istanbul Metropolitan Municipality, were providing home health services for elderly patients.<sup>27,28</sup> In addition, paid medical care and accompaniment services were available in a few private institutions. Apart from these, homecare services were not provided.

Article 41 of the Constitution of Turkey confirms the protection of the family, Article 56 that everyone is entitled to live a healthy and balanced environment, Article 60 that people have the right to social security and Article 61 the protection of the elderly and disabled by the state.<sup>29</sup> Therefore, there is a legal basis for home care in Turkey. However, homecare services could not be performed effectively due to the problems arising from the implementation of the laws. Care service by public hospitals only began in 2004. These services, initiated by Balikesir State Hospital as a pilot institution, included home visits for bedridden patients.<sup>30</sup> Today, homecare service is provided through the home health management system by hospitals affiliated to the Ministry of Health in each province.<sup>31</sup> The "Regulation on the Provision of Home Health Care Services" was put into practice within the scope of the Health Transformation Program entered into force in 2005.<sup>32</sup> When this regulation entered into force, the private sector has been subject to this regulation. Following the Regulation, "Directive on the Application Procedures and Principles of Home Health Services Provided by the Ministry of Health"

entered into force in 2010 and home health care service was initiated by the health institutions and organizations affiliated with the Ministry of Health.<sup>13</sup> A year later, "Home Health Services Communication and Coordination Center" was established by the Istanbul Health Directorate.

In "Home Health Services Istanbul Workshop" organized by the Istanbul Health Directorate and the Istanbul Metropolitan Municipality in 2013, the problems experienced in home health care, the relevant legal regulations, the working conditions of the health personnel and the training needs were discussed. When we think of the results of this workshop, it can be emphasized that the applications should be evaluated by the family physicians, the patient acceptance-rejection criteria should be determined clearly and the application forms should be rearranged. Additionally, it has been recommended to limit the number of patients per unit and even to evaluate patients not as individuals but with their whole family. The need to elaborate the duties, authorities and responsibilities of family physicians and staff regarding homecare services and to define them in the legislation was mentioned too. Finally, the importance of planning the certificate programs separately for the training of educators and practitioners was emphasized and the Ministry of Health, Universities and Non-Governmental Organizations were invited to cooperate in order to determine the content, duration, criteria and validity-renewal periods of the certificate.<sup>33</sup>

## Epidemiology

There are many studies conducted in Turkey and abroad. In these studies, it was observed that the majority of patients receiving homecare services were women over the age of 65. The information that life expectancy for women is longer than men also supports this fact. Two studies conducted in Ankara suggested that among the people receiving home healthcare services, 62.5% in 2006 and 67.8% in 2013 were women. In a study conducted on people aged and over 65 received home healthcare services in Burdur, it was revealed that 67.6% of them were women.<sup>5,34,35</sup> In 1998, 83% of those receiving home services in Austria, 83% in Germany, and 63% in the USA were 65 years old and over.<sup>36</sup> It was stated that 54.8% of the patients received homecare services in Jordan in 2014 were 60 years old and above.<sup>37</sup> In 2015, it was shown that 59% of patients receiving home healthcare services in Croatia were women and 51% were between the ages of 70-79.<sup>38</sup>

In a study conducted in 2012, it was found that the most frequently provided services to home care patients by healthcare personnel are examination, observation, medication, injection, catheterization and wound care.<sup>35</sup> Disease distributions of 214 people receiving home health care services in 2014 were determined to be hypertension, diabetes, stroke, fracture, cancer, Alzheimer's, joint diseases, and neurological diseases.<sup>39</sup>

Home conditions, life activities, psychosocial conditions (such as depression) and daily care (such as incontinence) of the elderly are significant variables affecting the quality of life.<sup>40</sup> Efforts have been made to increase self-care and self-management skills for individuals to be self-sufficient.<sup>3,41,42</sup> These have been very effective in improving the health status of elderly people. As a result of studies, it has been observed that people caring for the elderly receiving psychological, social and physical assistance positively affect the health of the elderly.<sup>43</sup>

Maternity and childcare are also considered within the scope of home health services. As a result of postnatal follow-ups, maternal and infant deaths decrease.<sup>44,45</sup> In homecare services, different professional groups such as physicians, nurses, pharmacists, social workers, psychologists, physiotherapists, home economists, and dieticians should work altogether.<sup>33</sup> Personnel to serve should be carefully selected, those providing care services should be trained at regular intervals and supported in every way.

According to "Long Term Home Based Care 2000 Report" by World Health Organization (WHO), in accordance with the definition of long term care, it was emphasized that all people with chronic health problems and in need of help with daily living activities should receive care that will ensure a sufficient quality of life. According to this statement, those who will benefit from homecare services are those with infectious diseases such as tuberculosis or non-communicable chronic diseases such as cardiovascular diseases, cancer, individuals with physical and mental disabilities, HIV-positive individuals and substance addicts. The age groups provided with homecare services are predominantly elderly patients aged 65 and over in need of long-term care, all age groups with chronic diseases such as babies and children can receive these versatile care services safely in home conditions. Additionally, care services can also be provided at home in order to ensure that terminal cancer patients spend the last days of their lives with love and affection with their families.<sup>46</sup>

## Benefits of Homecare Services

It has many benefits such as home homecare services, increasing the effectiveness of treatment in severe diseases, and accelerating postoperative recovery in patients. When we consider the studies demonstrating the benefits of home care today, the home care program designed to reduce the side effects in patients receiving chemotherapy is seen to be more effective than standard care. It was also found that nursing care and education given to the mother through home visits in the postpartum period had a positive effect on the weight gain of the newborn.<sup>45</sup> When we think of Coronary Artery Bypass Grafting, which is one of the major operations in which vital complications can develop, it is known that complications usually occur within the first 6 weeks.<sup>47</sup> If a patient with open heart surgery did not have any complications, he can be discharged from the hospital in an average of 5-7 days. As is known, the wound has not fully healed on the day the patient is discharged. It is stated that patients are more likely to experience insomnia, nausea, anorexia and chest pain in the 1<sup>st</sup> and 3<sup>rd</sup> weeks after their discharge, and these problems are said to improve in the first six weeks.<sup>48,49</sup> It has been reported that effective care should be provided at home in order to detect these problems experienced by patients early after Coronary Artery Bypass Grafting (CABG) and to ensure the continuity of care. It was determined that 77% of the patients with CABG were satisfied with the care they received at home and preferred home care because of the comfortable home environment. When patients receive service in their living environment, they feel more comfortable, free and peaceful. In the environments where they are not separated from family members, treatment periods are also shortened.<sup>50</sup> In addition to this, since homecare reduces unnecessary hospitalizations, there is a decrease in hospital infections.<sup>51</sup>

## Risks of Homecare Services

Homecare services are demanding organizations that are open to many external factors, require a detailed training program and a close control mechanism.

- It may not be possible to establish an effective communication between the healthcare personnel and the patient and their family.
- Healthcare personnel cannot stay with the patient perpetually.
- Patients treated with intravenous treatment at home may be exposed to complications such as sepsis, thrombosis and vascular occlusion.<sup>7</sup>

## CONCLUSION and RECOMMENDATIONS

### Homecare Services Today

Chronic diseases and disability due to aging have led to an increase in social policies lately. The need for homecare services raised and it increased the budget allocated to health and encouraged people to search for new methods of care. Along with the developments, social policies were seriously affected, the relevant legal regulations in the health and social fields were reviewed and practices related to care insurance were put into effect.<sup>52</sup> Under the presidency of the provincial health directorate in Turkey, private hospitals and corporate offices can provide homecare services. Health personnel working in coordination centers affiliated to the health services presidency under the provincial health directorate and public hospitals provide care services. However, the fact that the service provided is not at the desired level is obvious. Life expectancy at birth in Turkey was 68.7 in 2003 but it increased to 78.6 in 2019.<sup>53,54</sup> This situation itself is an indicator that the increase in age, disability, chronic diseases and the demand for after-hospital care services will also increase health expenditures in the coming years significantly. Problems arise from the operation and practices of homecare services, standards, quality management, labor and financial insufficiency of the service's budget.<sup>55</sup> In the workshop report of Home Care Association in 2010, it is stated that to meet the needs of standardized and financially affordable solution for the development of homecare service model consistent with the health system in Turkey, it is important to solve the problems.<sup>56</sup>

441 units in total, including 34 mobile teams affiliated to Health Directorates and 407 home health units established within the hospitals, were approved by the Ministry in line with the Ministry of Health's Directive No. 3895 dated 1<sup>st</sup> February, 2010.<sup>13</sup> Homecare services are implemented in three ways today;

- Services provided by family physicians in line with the legal regulations of family medicine,
- Services provided by homecare service units established within hospitals,
- Services provided by the health directorates to the citizens in rural areas through mobile teams.

According to the regulation published in 2015; homecare services are provided in three types of units by the Ministry of Health;<sup>57</sup>

- T Type: Units affiliated with community health centers. It is primarily responsible for providing homecare services.
- H Type: Units affiliated with hospitals. It is primarily responsible for providing services such as specialist physician consultation and physiotherapy that cannot be provided by T-type units.
- D Type: Units affiliated with oral and dental care centers of State Hospitals of Turkey.<sup>12</sup>

However homecare services are now intensely provided by home healthcare units affiliated with state hospitals after 2017. Calls in Turkey are collected through "4443833" (444EVDE [like 444HOME]) and directed to call centers responsible for directing these records to the relevant departments. Applications are directed to the home health services unit within the hospital within the boundaries of the municipality where the applicant lives. Afterwards, the hospital home health service unit official will visit the place where the patient lives and decide whether or not to provide homecare service or the scope of the service to be provided. In this direction, it is planned to include the patient in the visit program and to inform the family physicians of all patients followed up within the scope of homecare services and to ensure coordination with family physicians.<sup>57</sup>

### Recommendations

With all these explanations, the health status of patients in need of receiving homecare services are evaluated and medical treatment, physical therapy, psychological support, transportation, etc. needs are determined. The most vital member of the homecare service performed thanks to team work is the nurse. The first evaluation is made by the home care nurse and the medical case manager responsible for the patient by defining the patient's care and health needs.<sup>58</sup> It is significant to provide access to the service in the easiest way, to resolve the problems that may occur in a short time, to generate ideas for the solution of legal deficiencies in this regard, and to evaluate financial allowances in accordance with the service. It is also significant that the public hospitals, private institutions and local administrations serving in this field are determined and work in cooperation. Homecare services are becoming more valuable day by day. The selection of the personnel to serve in home care is also of great significance in this regard. The healthcare personnel should be tolerant, patient, understanding, well-educated and friendly in terms of social relations.

## **Future of Homecare: The Impact of Technology on the Development of Homecare Services**

Information technology has been used in healthcare to bridge geographic distances and give people access to expert insights without traveling. Studies are carried out on how these technologies can be used to improve the quality of home healthcare services. As Demiris puts that there were 556 articles published on MEDLINE (Medical Literature Analysis and Retrieval System) on the use of technology in home healthcare services in 2003. This number reached 1390 articles after 10 years. This can be regarded as an important indicator since it shows that the issue has been taken very seriously in recent years.<sup>59</sup> Today, the importance of internet technology in our lives has once again emerged in the isolation processes experienced in the era of COVID-19 pandemic. Therefore, it can be expected that in the future, homecare services will use internet technology and provide online health services with a common web-based system by establishing an interactive health network. Service quality can be increased by having an accurate and fast programming of this system's work flow, tracking and reporting. Applications to be made can be directed to the homecare service team as soon as possible. If necessary, a live connection (audio or visual) can be established. Due to the necessity that the service provided should be complementary, the physicians, nurses, physiotherapists, psychologists and other care team can see the care service that has been done or planned to be done with a common system and a more effective service can be provided. For the ones who have not used computer technology before, other technologies such as tablet computers with very simple operating systems may be available. In addition to this, users should be able to benefit from health applications running on tablet computers as well as use these tablets for e-mail and social networking.<sup>60</sup>

The use of embedded cameras, sensors or other devices can be monitored with a system to be placed in the infrastructure of new or restored houses, especially for the elderly who cannot actively benefit from technology. This will not only be a technology use but it also becomes an alternative homecare service model. There may be a transformation from home health care approach to “smart homes where people can maintain their health”. If we categorize the technologies to be used here as active and passive technology, what can be done about passive technology:

1. Discomfort and interruptions during sleep can be detected by remote monitoring technologies.
2. Vital signs can be reported by bed sensors that can measure pulse and respiration.
3. The heat to occur when someone forgets the stove open or the heat that to occur during food preparation can be distinguished by the motion and temperature sensors.
4. The number of visitors, time spent inside and outside the house and sedentary behavior can be monitored by the sensor based systems.
5. Necessary warnings can be made; reminders can be triggered or lights can be turned on thanks to automated features running in the background

With active technology, below can be done:

1. Active technology captures vital signs, weight or symptoms and reports them to the health institution, the monitoring system or the doctor.
2. Thanks to the devices people can wear on their bodies, it can detect falls or trigger personal emergency intervention or assistance systems with the ease of pressing a button so that the person can call for help when they fall.
3. Thanks to the alarm systems, ordinary or extraordinary situations such as fire or flood can be actively detected and a solution can be offered.
4. Alerts and reminders can actively help locate lost objects or dispense medications.<sup>59</sup>

It is possible to get support from robots managed by artificial intelligence technology. For instance, if the patient is bedridden and has no companion, these robots can improve the quality of life and well-being of this person. On the other hand, since a person is a social being after all, the need for other people will never end. Although it is predicted that many needs can be met by artificial intelligence networks or robots, social support and mental health issues will perhaps gain more importance on another level. In other words, although the presence of artificial intelligence in the team that will provide homecare services will contribute for sure, it must be stated from this day on that the human factor should not be excluded from the team.



## CONCLUSION

As can be seen, home healthcare services have a wide scope with its past and future. It should be taken into account that the need for access to healthcare services will increase with the expected demographic transformation in the future. With the development of technology, it is important that home healthcare services are dynamically provided by the governments to the whole public easily.

## Ethical issues

Ethical issues (including plagiarism, data generation and/or falsification, duplicate publication and/or submission, redundancy, etc.) have been thoroughly reviewed by all authors. Ethical and patient consent is not required. The study was carried out in accordance with the Helsinki Declaration Principles.

\*The authors declare that there are no conflicts of interest



## REFERENCES

1. World Health Organization Long-Term Care Team. World Health Statistics 2020: Monitoring Health for the SDGs, Sustainable Development Goals. World Health Organization; [accessed 01.04.2021]; Available from: <https://apps.who.int/iris/handle/10665/332070>.
2. Adak N. Yaşlıların Gayri Resmi Bakıcıları: Kadınlar. Sosyal Politika Çalışmaları Dergisi 2003; 5: p. 74-82.
3. Nuovo J. Chronic Disease Management. 1 ed. New York: Springer-Verlag New York; 2007; X, 374. DOI: 10.1007/978-0-387-49369-5.
4. World Health Organization. Declaration of Alma-Ata. World Health Organization; 1978 [accessed 01.04.2021]; Available from: <https://www.euro.who.int/en/publications/policy-documents/declaration-of-alma-ata,-1978>.
5. Çavuş FÖ. Assessment of Home Care Services of The Elders; in Institute of Social Sciences, Department of Social Service, Hacettepe University; 2013.
6. World Health Assembly. Part II: Verbatim Records of Plenary Meetings: Summary Records and Reports of Committees. Thirtieth World Health Assembly; 2-19. May.1977; Geneva: World Health Organization.
7. Yılmaz M, Sametoğlu F, Akmeşe G, et al. Sağlık hizmetinin alternatif bir sunum şekli olarak evde hasta bakımı. İstanbul Medical Journal 2010; 11: 125-132.
8. Çoban M, Esatoğlu AE. Evde bakım hizmetlerine genel bir bakış. Türkiye Klinikleri J Med Ethics-Law Hist. 2004; 12: 109-120.
9. Aksoy H, Kahveci R, Şencan İ, Kasım İ, Özkara A. An overview of home care services and the current situation in Turkey. Turk J of Med Sci 2015; 7: 162-168.
10. Nasrabadi AN, Shahsavari H, Almasian M, Heydari H, Hazini A. Designing a process model of home care service delivery in Iran: A mixed methods study. International J Community Based Nurs Midwifery 2019; 7: 288. DOI: 10.30476/IJCBNM.2019.73934.0.
11. Genet N, Boerma W, Kroneman M, Hutchinson A, Saltman RB. Home Care Across Europe. World Health Organization; 2012; Geneva.
12. Republic of Turkey Ministry of Health. Regulation on the Submission of Health Services at Home by the Ministry of Health and Its Affiliates, No. 29280, dated 27.02.2015, Official Newspaper of the Republic of Turkey. [accessed 01.04.2021]; Available from: <https://www.resmigazete.gov.tr/eskiler/2015/02/20150227-14.htm>.
13. Republic of Turkey Ministry of Health. Directive on the Application Procedures and Principles of Home Health Services Provided by the Ministry of Health, No. 3895, dated 01.02.2010, Official Newspaper of the Republic of Turkey. [accessed 01.04.2021]; Available from: [https://hsgm.saglik.gov.tr/dosya/mevzuat/yonergeler/evde\\_saglik\\_hizmeti\\_yonerge.pdf](https://hsgm.saglik.gov.tr/dosya/mevzuat/yonergeler/evde_saglik_hizmeti_yonerge.pdf).
14. Wanless D, Forder J, Fernandez J-L, et al. Securing good care for older people: taking a long-term view: Wanless Social Care Review; King's Fund; London. 2006
15. Tarricone R, Tsouros AD. Home Care in Europe: The Solid Facts: WHO Regional Office Europe; 2008.
16. Spano P. Le Convenienze Nascoste. Il fenomeno badanti e le risposte del welfare [Hidden conveniences. The issue of home care assistants and the response of the welfare system], Dimensione N, editor. Verona; 2006.
17. Seyyar A. Dünya'da ve Türkiye'de yaşlılığa bağlı bakım sorununa karşı güvence sistemleri. Ozveri Dergisi 2005; 2: 377-503.
18. Feder J, Komisar HL, Niefeld M. Long-Term Care in The United States: An Overview: A Complex System of Public and Private Funding Often Leaves Elderly Persons at Risk of Financial Catastrophe and Inadequate Care. Health Aff 2000; 19: 40-56. DOI: 10.1377/hlthaff.19.3.40.
19. Zıplar ÜT. Dünyada ve Türkiye'de yaşlılık hizmetleri. Journal of Institute of Social Sciences 2017; 6: 173-194.
20. Kodner DL. Whole-system Approaches to Health and Social Care Partnerships for The Frail Elderly: An Exploration of North American Models and Lessons. Health Soc Care Community. 2006; 14: 384-390. DOI: 10.1111/j.1365-2524.2006.00655.x.
21. Brodsky J, Habib J, Mizrahi I, World Health Organization. Long-Term Care T. Long-term Care Laws in Five Developed Countries :A Review. Geneva: World Health Organization; 2000.
22. Öztürk H. Fatih Mehmet II Vakfiyeleri üzerine bir değerlendirme. Türk Dünyası Uygulama ve Araştırma Merkezi Tıp Tarihi ve Etik Dergisi 2016; 1.
23. Çoban M, Esatoğlu AE, İzgi MC. Historical evolution of home care applications in legislative base in Turkey. Turk J Bioeth 2014; 1: 154-176.
24. Ören MM. İstanbul'un bir ilçesinde evde sağlık hizmeti alan bireylerin yeti yitimlerinin değerlendirilmesi; in İstanbul Faculty of Medicine, Department of Public Health, İstanbul University; 2017.

- 25.** Republic of Turkey Ministry of Health. Law on Socialization of Health Services, No. 10705, dated 05.01.1961, Official Newspaper of the Republic of Turkey. [accessed 01.04.2021]; Available from: <https://www.mevzuat.gov.tr/MevzuatMetin/1.4.224.pdf>.
- 26.** Karataş N. Birinci basamak sağlık hizmetlerinde halk sağlığı hemşiresinin durumu. *Community and Physician*. 2000; 15: 174-177.
- 27.** Ankara Metropolitan Municipality Official Website. [accessed 01.02.2021]; Available from: <https://www.ankara.bel.tr/haberler/yasli-dostu-belediye/>.
- 28.** Istanbul Metropolitan Municipality Official Website. [accessed 01.02.2021]; Available from: <http://www.ibb.gov.tr/tr-tr/kurumsal/birimler/saglikas/documents/hakkinda.pdf>.
- 29.** T.R. Constitution. 1982 [accessed 01.04.2021]; Available from: <https://www.mevzuat.gov.tr/MevzuatMetin/1.5.2709.pdf>.
- 30.** Altuntaş M, Yılmaz TT, Güçlü YA, Öngel K. Home health care service and recent applications in Turkey. *The Journal of Tepecik Education and Research Hospital* 2010; 20: 153-158. DOI: 10.5222/terh.2010.35984.
- 31.** Evde Sağlık Yönetim Sistemi. [accessed 01.04.2021]; Available from: <https://evdesaglik.saglik.gov.tr>.
- 32.** Republic of Turkey Ministry of Health. Regulation on Home Care Services Provision, No. 25751, dated 10.03.2005, Official Newspaper of the Republic of Turkey. [accessed 01.04.2021]; Available from: <https://resmigazete.gov.tr/fihrist?tarih=2005-03-10>.
- 33.** Istanbul Health Directorate. Evde Sağlık Hizmetleri İstanbul Çalıştayı. İstanbul: İstanbul Health Directorate; 2013 [accessed 01.04.2021]; Available from: [http://www.istanbulsaglik.gov.tr/w/sb/tedk/belge/Evde\\_Sag\\_Istanbul\\_Calistay\\_Sonuc\\_Rapor.pdf](http://www.istanbulsaglik.gov.tr/w/sb/tedk/belge/Evde_Sag_Istanbul_Calistay_Sonuc_Rapor.pdf).
- 34.** Subaşı N, Öztekin Z. Unmet Need In Turkey: Home Care Service. *TAF Prev Med Bul* 2006; 5: 19-31. DOI: 10.17098/amj.542307.
- 35.** Çatak B, Kılınç AS, Badıllıoğlu O, et al. Burdur'da Evde Sağlık Hizmeti Alan Yaslı Hastaların Profili ve Evde Verilen Sağlık Hizmetleri. *Turk J Public Health* 2012; 10: 13.
- 36.** Karahan A, Güven S. Homecare for Elderly. *Turk J Geri* 2002; 5: 155-159.
- 37.** Dawani HA, Hamdan-Mansour AM, Ajlouni MT. Users' perception and satisfaction of current situation of home health care services in Jordan. *Health*. 2014; 6: 549-558. DOI: 10.4236/health.2014.67074.
- 38.** Kouta C, Kaite CP, Papadopoulos I, Phellas CN. Evaluation of home care nursing for elderly people in Cyprus. *Int J Caring Sci* 2015; 8: 376-384.
- 39.** Oğuz I, Kandemir A, Erişen MA, Fidan C. Evde sağlık hizmeti alan hastaların profili ve sunulan hizmetin değerlendirilmesi. *Hacettepe Health Administration Journal* 2016; 19.
- 40.** Erdem M. Yaslıya Bakım Verme. *Journal of Anatolia Nursing and Health Sciences* 2005; 8: 101-106.
- 41.** Daniş MZ. Yaşlıların evde bakım gereksinimleri ve evde bakıma ilişkin düşünceleri: başarılı yaşlanma ve yaşlı bakım modelleri. Ankara: Guc-Vak Yayınları, Sosyal Hizmet Dizisi, Vol. 1; 2004.
- 42.** Cook-Campbell J, Sefton M. Discharge teaching about Warfarin: Patient retention of knowledge. *Home Healthca Nurse* 2010; 28: 366-374. DOI: 10.1097/NHH.0b013e3181df5e87.
- 43.** Remennick LI. "All My Life is One Big Nursing Home": Russian Immigrant Women in Israel Speak about Double Caregiver Stress; 2001: Elsevier. DOI: 10.1016/S0277-5395(01)00205-9.
- 44.** Ergin F, Aksu H, Demiröz H. Doğum öncesi ve doğum sonrası bakım hizmetlerinin nicelik ve niteliği. *Journal of Anatolia Nursing and Health Sciences* 2010; 13: 1-9.
- 45.** Duman NB, Karataş N. Sezaryen sonrası erken taburcu olan kadınlara verilen evde bakım hizmetinin anne sağlığına ve öz bakım gücüne etkisi. *Sağlık Bilimleri Dergisi* 2011; 20: 54-67.
- 46.** World Health Organization. Home Based Long Term Care. 2000 [accessed 01.04.2021]; Available from: [https://apps.who.int/iris/bitstream/handle/10665/42343/WHO\\_TRS\\_898.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/42343/WHO_TRS_898.pdf?sequence=1).
- 47.** House M, Griego L. Nursing Role in management congestive heart failure and cardiac surgery. *Medical Surgical Patient*, 4 ed. Lewis SM CC, Heitkemper MM, editor. Toronto: Mosby; 1998.
- 48.** Gallagher R, McKinley S, Dracup K. Post Discharge problems in women recovering from coronary artery bypass graft surgery. *Austr Crit Care* 2004; 17: 160-165. DOI: 10.1016/S1036-7314(04)80021-3.
- 49.** Goodman H. Patients' Perceptions of their education needs in the first six weeks following discharge after cardiac surgery. *J Adv Nurs* 1997; 25: 1241-1251. DOI: 10.1046/j.1365-2648.1997.19970251241.x.
- 50.** Yılmaz M, Çiçci ES. A Model defining the needs of patient care at home after open heart surgery: functional health patterns. *Turkish Journal of Thoracic and Cardiovascular Surgery* 2010; 18: 183-189.
- 51.** Bayramlar OF. Cost Analysis of Device-associated Infections in a University Hospital; in Istanbul Faculty of Medicine, Department of Public Health, Istanbul University; 2020. DOI: 10.13140/RG.2.2.28872.55045.
- 52.** International Labour Organization. Social Security (Minimum Standards) Convention No.102 1952 [accessed 01.04.2021]; Available from: [https://www.ilo.org/ankara/conventions-ratified-by-turkey/WCMS\\_377270/lang--tr/index.htm](https://www.ilo.org/ankara/conventions-ratified-by-turkey/WCMS_377270/lang--tr/index.htm).
- 53.** United Nations Development Programme. Human Development Report. 2003 [accessed 01.04.2021]; Available from: <https://www.tr.undp.org/content/turkey/tr/home/presscenter/articles/2005/09/09/human-development-index-2005-statistical-overview.html>.
- 54.** Turkish Statistical Institute. Hayat Tabloları. 2017-2019 [accessed 01.04.2021]; Available from: <https://data.tuik.gov.tr/Bulten/Index?p=Hayat-Tabloları-2017-2019-33711>.
- 55.** Sürekli HE. OECD, Avrupa birliği sağlık istatistikleri ve Türkiye: Union of Public Hospitals in Turkey. 2015 [accessed 01.04.2021]; Available from: <https://www.saglikaktuel.com/d/file/35c966a9f1d343909d4d0858bec69333.pdf>
- 56.** Evde Bakım Derneği. Çalıştay Sonuç Raporu. 2010 [accessed 01.04.2021]; Available from: [https://www.saglikaktuel.com/d/file/ulkemiz\\_icin\\_evde\\_bakim\\_modeli\\_calistayi\\_sonuc\\_raporu\\_ve\\_ek.1\[1\].pdf](https://www.saglikaktuel.com/d/file/ulkemiz_icin_evde_bakim_modeli_calistayi_sonuc_raporu_ve_ek.1[1].pdf).

57. Özlü CÇ. Sağlık Bakanlığı evde sağlık hizmetlerine nasıl başvurulur? : SESAN; 2019 [accessed 01.04.2021]; Available from: <https://sesanltd.com.tr/saglik-bakanligi-evde-saglik-hizmetlerine-nasil-basvurulur/>.
58. Karakaş NM, Özçelik EU. Evde hasta bakım öğrencilerinin eğitimleri ve mesleğin geleceği ile ilgili görüşleri ve evde hastabakım programını tercih etme nedenleri. *Journal of Vocational School of Health Service* 2014; 2: 22-28.
59. Medicine Io, Council NR. The Future of Home Health Care: Workshop Summary. Weisfeld V, Lustig TA, editors. Washington, DC: The National Academies Press; 2015; X, 168. DOI: 10.17226/21662.
60. Aktas A. İnternette sağlık Hizmetleri; interaktif sanal sağlık danışmanlığı programı. *Medical Informatics '05 Turkey*; 17-20.11.2005; Belek, Antalya, Turkey: Tıp Bilisimi Derneği; 2005. 62-66.