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Sociodemographic and Clinical Characteristics of the Patients Registered by Home Care Services Unit of A State Hospital

Bir Devlet Hastanesi Evde Sağlık Hizmetleri Biriminden Hizmet Alan Hastaların Sosyo-Demografik ve Klinik Özellikleri

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ABSTRACT

Aim: To determine the quality of home care given and the socio-demographic and clinical characteristics of patients registered by home care services. **Materials and methods**: In this descriptive study, medical records of 800 patients registered by home care services of Kecioren Training and Research Hospital were analyzed retrospectively. Sociodemographic and clinical characteristics of the patients and types of services they received were evaluated. The data were analyzed by SPSS statistical software. Numerical variables were expressed as mean ± standard deviations and categorical variables as numbers and percentages (n, %). **Results:** Of the 800 patients 37.3% (n=297) were male and 62.7% (n=503) were female. Mean age of the patients was 75.6±15.3 years. Mean age of the males and females were 70.8±17.6 and 78.4±12.9 years, respectively and 2.9% (n=23) of them had no health insurance. Mean number of diseases was 2.6±1.3 and 41.4% (n=331) of patients had hypertension and 27.3% (n=218) had various neurological diseases such as Alzheimer, Parkinson, traumatic sequels and 13% (n=104) had decubitus ulcers. The leading cause of home care visit request was desire to have a physical examination with a rate of 41.4% (n=331). **Conclusion:** Patients receiving home care services had various types of disease patterns and disabilities. Therefore, expectations about home care services were vary by patients and their family members.

Key words: Home care service, patients, clinical characteristics

ÖZET

Amaç: Evde Sağlık Hizmetleri Birimi'nden hizmet alan hastaların sosyo-demografik ve klinik özelliklerinin ve aldıkları hizmetlerin değerlendirilmesi. **Gereç ve Yöntem:** Tanımlayıcı tipteki çalışmada 15-25 Şubat 2014 tarihleri arasında Keçiören Eğitim ve Araştırma Hastanesi Evde Sağlık Hizmetleri Birimi'ne kayıtlı olan 800 hastanın dosyası retrospektif olarak incelendi. Hastaların sosyo-demografik ve klinik özellikleri ve aldıkları hizmetler kayıt edildi. Verilerin analizleri SPSS istatistik programında yapıldı. Numerik değişkenler ortalama±standart sapma olarak, kategorik değişkenler n (%) olarak ifade edildi. **Bulgular:** Hastaların %37,3'ü(n=297) erkek, %62,7'si (n=503) kadındı. Yaş ortalaması 75,6±15,3 yıl olup erkeklerin yaş ortalaması 70,8±17,6 iken kadınlarda 78,4±12,9 yıldı ve %2,9'unun (n=23)sağlık güvencesi yoktu. Hastaların ortalama hastalık sayısı 2,6±1,3 idi ve %41,4'ünde (n=331) hipertansiyon, %27,3'ünde (n=218) ise Alzheimer, Parkinson, travma sekeli gibi nörolojik hastalık mevcuttu. Hastaların %13,0'ünde (n=104) dekübit ülseri mevcuttu. Hastaların başvuru nedenlerinin başında %41,4 (n=331) oranında muayene istemi gelmekteydi. **Sonuç:** Evde sağlık hizmetinden faydalanan bireylerin hastalık ve bağımlılık durumları farklıdır. Hastaların ve hasta yakınlarının sağlık hizmeti beklentileri de buna göre değişmektedir.

Anahtar kelimeler: Evde sağlık hizmetleri, hastalar, klinik özellikler

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INTRODUCTION

According to the United Nations, developed countries are facing a global, demographic challenge due to their growing population of older people. Annual growth rate of the population 80 years or over, is twice as it is for people 60 years or older.[1] As life expectancy increases, the population in our country also aging like the western world. This is in accordance with an increase in incidence of chronic diseases which may easily lead to high rates of disability and mortality.[2] Such an increase in the ratio of older population has necessitated the construction of new approaches in health care models. Home care services (HCS) are structured to provide health care to bedridden patients at home both for treatment and follow-up.

In our country, HCSs are constructed in 2010 by Ministry of Health (MoH) and its frame is defined by a directive published on February 2nd, 2010. Despite diversities and conflicts in supplying services in practice as it is recently constructed, the services are well defined.[3] According to this directive, patients who can ask to receive care are as follows: Immobilised or semi-mobilised patients suffering from end-stage cancer, advanced stage muscle diseases, respiratory diseases such as refractory chronic obstructive pulmonary disease (COPD), dental problems and newborns requiring phototherapy for jaundice. By way of introducing HCS, close and regular follow-up of these bedridden patients and handling of acute and chronic complications would decrease hospitalisations and eventually reduce economic burden on the state and families.[4] Almost all of these patients are immobilized and many are suffering from complications of a cerebrovascular accident (CVA) such as hemiplegia or tetraplegia.[5]

In their study Limnili and Özçakar reported that confinement to bed was due to old age and chronic conditions such as cerebrovascular diseases and demans in %64.3 of the home care applicants while due to physical and mental disability in %35.7 of them. Main expectations from HCS were drug prescriptions and reports, provision of medical supplies and equipment.[6] Enginyurt and Öngel also reported that common diseases that were seen among the home care applicants were cerebrovasculardiseases and Alzheimer.[7] HCS, which is very recently introduced in our country comparing with western countries where it has been established years ago, is mostly provided by the departments of family medicine.

The aim of our study is to evaluate socio-demographic and clinical characteristics of patients received home care from the HCS Unit of Kecioren Research Hospital since 2010 so that we can have some data to be able to increase the quality and efficiency of the service with a better orientation.

MATERIALS AND METHODS

In this descriptive study, medical records of all patients who received HCS from Kecioren Research Hospital between October 2010 and February 2014 have been analyzed retrospectively. The service is provided by family physicians, nurses and medical secretaries of the HCS unit. Home care service includes physical and laboratory examination as well as reports for medications and medical devices. Patients are visited with three-months intervals and visits last about 20 minutes. Socio-demographic characteristics, details of diseases and health status, causes of demands to receive HCS and the services they were receiving have been recorded. Data collected were transferred to Microsoft Excel program and analyzed by using Statistical Package designed for the Social Sciences (SPSS) software, version 17.0 (SPSS Inc., Chicago, IL, USA). Numerical variables were expressed as mean ± standard deviations and categorical variables as numbers, percentages (n, %). Minimum and maximum (min-max) values were given in brackets as needed. Study was conducted with the permission of local ethical committee of the institution.

RESULTS

Of the 800 patients followed up by HCS unit 37.3% (n=297) were male and 62.7% (n =503) were women. Mean age was 75.6±15.3 years (aged between 14-98 years). Distribution of patients according to age groups were as follows; 4.5% (n=36) of them were younger than 40 years, 13.5% (n=108) were between 40-65 years, 33.3% (n=266) were between 66-80 years and 48.8% (n=390) were older than 80 years. The mean age of male and female patients were 70.8±17.6 and 78.4±12.9, respectively. The average number of diseases was 2.6±1.3 (ranged between 1-12). Gender, health insurance, diseases and reasons for demand to receive HCS of the patients are shown in Table 1.

Table 1. Gender and health insurance of the patients

Gender	**N %**
Female	503 (62,7)
Male	297 (37,3)
Health insurance	
Social insurance institution	460 (57,5)
State retirement fund	158 (19,8)
Social security for the self-employed	118 (14,7)
Health card for uninsured	31 (3,9)
None	23 (2,9)

About 2,9% of the patients did not have any health insurance. The most common disease was hypertension (HT) with the percentage of 41.4. Of the patients 27.3%

had neurological diseases such as Alzheimer's, Parkinson's or traumatic sequels. (Table 2)

The leading cause to receive HCS was a request for medical examination (41.4%). A small percentage of patients (0.3%) applied to HCS for other reasons like bed wound care and urinary bladder catheterization or catheter removal. Of the patients 7.3% (n=59) were followed up for renal function tests and 14.5% (n= 116) for monitoring of international normalization ratio (INR) levels. Percentage of diaper usage, due to urinary and fecal incontinence, was 44.4% (n=355) and enteral nutrition products usage was 8.3% (n=66). Thirteen percent of the patients (n=104) had decubitus ulcers and 54.8% (n=57) of these were being followed up by the plastic surgery department. Of the study patients, 12.1% (n=97) of them were being evaluated regularly by psychiatry department through home visits.
When the distribution of diseases were assessed according to age groups statistically significant differences were found. Neurological diseases were higher among patients younger than 40 years of age, while CVA was higher among patients older than 66 years of age (p=0.001) (Table 3).

Table 2. Diseases and reasons for demand to receive Home Care Service (HCS) of the patients

Diseases	**N %**
Hypertension	331 (41,4)
Cerebrovascular accident	274 (34,3)
Diabetes Mellitus	229 (28,7)
Neurological Diseases	218 (27,3)
Chronic Heart Failure	121 (15,1)
Reasons of requesting HCS	
Medical examination	331 (41,4)
Reports for medications and devices	282 (35,3)
Laboratory analysis	87 (10,8)
Routine follow-up	58 (7,3)
Treatment	40 (5,0)
Other	2 (0,3)

Table 3. Distribution of diseases according to age groups

Age groups	**Diseases**					
	DM	**HT**	**CVA, CVA+ comorbid diseases**	**DM+HT, DM+CHF, HT+CHF, DM+HT+CHF**	**Neurological diseases**	**Total**
<40 years	1 (2.8%)	0 (0.0%)	4 (11.4%)	1 (2.8%)	30 (83.3%)	36 (100%)
40-65 years	5 (4.6%)	13 (12.0%)	42 (38.9%)	8 (7.4%)	40 (37.0%)	108 (100%)
66-80 years	8 (3.0%)	40 (15.0%)	117 (44.0%)	44 (16.5%)	57 (21.4%)	266 (100%)
>80 years	8 (2.1%)	123 (22.0%)	110 (28.2%)	58 (14.9%)	91 (23.2%)	390 (100%)
Total	22 (2.8%)	176 (22.0%)	273 (34.1%)	111 (34.1%)	218 (27.3%)	800 (100%)

DISCUSSION

In our study we aimed to define the clinical and socio-demographic characteristics of patients registered by HCS unit of our hospital The mean age of patients was 75.6 years ranging between 14-98 years. Majority of the patients were female and had more than 2 diseases in which HT was the most prevalent. Although percentage of old population was high among the patients, there were also young ones. Two thirds of the patients were female and their mean age was 8 years more than that of the males. In two similar studies conducted in our country, mean ages of the patients admitted to HCS were reported as 79,6 ve 58,4 years, respectively.[6,8] In a multi-centered study from North Europe, mean age of the patients was reported as 83,5 years and mean age of the females were 2 years more than that of the males.[9] The difference between the results of ours and this study can be explained by shorter life expectancy (73 versus 77 years) and lower percentage of older population (65 years old or above) in our country comparing with Northern European countries (7.7% versus 15%).[1,10] In a similar study by Kamenski et al. 2/3 of the patients were female and they were 5 years older than men.[11] In Subaşı et al.'s study 62.5% of the patients receiving home care were female.[12] In the United States, the rate of home health care use for women aged 65 and over was 55% higher than the rate for men.[13] Women have a higher life expectancy than men worldwide and therefore women are exposed more frequently to chronic illnesses and other problems related with aging and need more frequently to home care services.

The patients in our study had more than 2 diseases in average and among these diseases HT was the most prevalent followed by CVA and DM, Nearly 1/3rd of the patients had neurological diseases such as Alzheimer's and Parkinson's. In another study conducted by Enginyurt et al., CVA was reported as the most prevalent disease, followed by dementia.[7] In a similar study Çatak et al. reported that HT was as the most prevalent chronic disease followed by CVA.[8] In Limnili et al.'s study dementia was reported as the most prevalent diseases among their patient group.[6] Kamenski et al. found in their study that diseases of the central nervous and skeletal systems were the main reasons for requiring home care.[11] In another study from Japan it was reported that HT was the most prevalent disease in patients receiving HCS.[14] Yörük et al. indicated in their study that cardiovascular diseases and hemiplegia were the main diseases for receiving home care service.[15] Hemiplegia is the most common condition that cause disability in the elderly and cardiovascular diseases which are risk factors for hemiplegia, increase with age. As mostly bedridden patients benefit from HCSs, cardiovascular diseases, CVA and hemiplegia as a result of these to these problems are seem to be the main reasons for receiving home care services. CVA was the most common disease among our patients older than 66 years.

According to a study conducted by Sorbye et al., among older population receiving HCS, prevalence of Alzheimer's and Parkinson's was 11.5%, and 2% respectively.[9] In the study of Vu et al. it was reported that approximately 22% of patients had dementia (mean age 83 years, 64% female) and about one in four had a co-existing neurological condition (most commonly stroke or Parkinson's disease) and these patients showed considerably higher levels of cognitive and functional impairment, aggression, anxiety, wandering and hallucinations/delusions.[16] Supporting these results, de Langeet al. showed in their study that the rate of cognitive problems is two times, the prevalence of depression even three times higher in older people living in a home than in those who live independently.[17] Such neurological diseases like Alzheimer's are mostly accompanied by various psychiatric disorders causing more complicated situations so that it becomes much more difficult for caregivers to follow up and support such patients. Among our patients, 27.3% had neurological diseases such as Alzheimer's, Parkinson's or traumatic sequels and 12.1% were assessed by a psychiatrist in their homes.

HCS requires well coordinated and integrated participation of all departments to ensure effective and adequate care for the patients. To achieve this goal, necessary steps should be taken to organize such cooperation between disciplines. Our HCS team is being supported by psychiatry, plastic surgery and neurology departments of our hospital but, when needed, support provided by other departments is frequently insufficient and causing failures in services. As mentioned above 12.1% of our patients are assessed by psychiatry department, also 13.0% of them are being followed up by plastic surgery for pressure ulcers. The patients receiving home care are generally older people as shown in studies and we also know that older people are at increased risk of developing pressure ulcers. In their studies aimed to determine the prevalence of pressure ulcers among patients admitted to HCS, Önder et al. reported the rate of pressure injuries as 25% where as Ferrell et al. 9.12% and Bergquis et al. 3.2%.[18-20] The lower ratio in Bergquis' study may be due to including only stage II to IV pressure ulcers into their study. Age is an important factor that the majority (approximately two-third) of pressure ulcers occur in elderly (60-80 years of age).[21] Therefore patients above age 60 who are admitted to a home care units with risk factors for pressure ulcers require close monitoring for ulcer development.

In our patients, main reason to request HCS was desire to have a medical examination, followed by the request for reports of medications and medical supporting devices. Nearly half of these patients were using diaper because of urinary and faecal incontinence. A small percentage of patients attended to HCS for other reasons like bed wound care and urinary bladder catheterization or catheter removal. Various studies reported that patients' requests to receive HCS were similar to ours, besides requests from family members to be supported psychologically and socially in order to diminish the burden of care.[6,8,15] Kim et al. determined the patient characteristics that predicted greater use of home care rather than nursing home services were, poor physical function, impaired cognitive function, higher rates of comorbidity, various medical complications,

and/or number of catheters (e.g. urinary catheter, naso-gastric tube).[22]

Main limitations of our study are being retrospective and being based on medical records. Although our results are similar to the results of other studies conducted in our country on this subject they can not be generalized.

It is obvious that general characteristics of older patients receiving HCS within their homes are different in some aspects from other older ones who do not need HCS. This determination necessitates a different approach while supplying HCS to these patient groups. It is evident that constructing and introducing HCS by the state in our developing and still traditional society is a significant development in health care. It is also evident that this system needs to be developed and settled. To achieve nationwide, well established and functioning HCS, standards should be created and maintained successfully. HCS professionals should also be well equipped and educated as in other areas and they should also be aware that this system may require more dedication, effort, patience and tolerance comparing with other health care services. They should consider a closer relationship with these patients by keeping in mind that mutual trust is vital to be able to support and help these groups of patients. Taking care of patients within their homes may cause restrictions and difficulties in terms of treating and assessing the patients' health problems; it may also cause safety problems for the professionals but also for the patients. Taking into account of all these facts, HCS professionals may better be chosen on a voluntary basis.

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