### RESEARCH ARTICLE

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# Home Health Care Services in Turkey: The Sample of Bolu

**ABSTRACT** 

**Objective:** This study was planned with the aim of determining the clinical characteristics of patients served by the Bolu Home Health Care Services (HHCS), their reasons for making use of home health care services, and the distribution of care. **Methods:** The sample of this descriptive study consisted of 386 patients to whom service was being provided by Bolu HHCS. A Patient Information Form created by the researchers by examining the relevant literature was used to collect data. Numbers, percentages and mean were used in the analysis of data.

**Results:** The mean age of the individuals receiving HHCS who participated in the study was  $61.6\pm10.4$  years; a majority were female; 50.8% were married and 78.0% lived with their families, and for 70%, their children had applied to HHCS. It was found that most of the patients (96.1%) were satisfied with the home care services, 97.6% had no expectations beyond the current services, 80.1% had a chronic illness, with circulatory system diseases the most common; they most often made use of physical examination, blood collection and wound dressing services, and most were old and dependent patients.

**Conclusions:** It was seen in the light of the results of the study that it is important to plan home health care services especially for dependent and semi-dependent old people, to develop protective health services relating to the risks of early stage stroke and cardiovascular disease, and to improve rehabilitation services.

Keywords: Home Care Services, Home Care, Bolu

## Türkiye'de Evde Sağlık Bakım Hizmetleri: Bolu Örneği

Amaç: Bu araştırma, Bolu Evde Sağlık Hizmetleri (ESH) biriminde, hizmet kapsamına alınan hastaların klinik özellikleri, evde bakım hizmetinden yararlanma nedenleri ve hizmet dağılımlarının belirlenmesi amacıyla planlanmıştır.

Gereç ve Yöntem: Tanımlayıcı olarak planlanan bu araştırmanın örneklemini Bolu ESH biriminde hizmet verilen toplam 386 hasta oluşturmuştur. Veriler, araştırmacılar tarafından ilgili literatür incelenerek oluşturulan "Hasta Bilgi Formu" kullanılarak toplanmıştır. Verilerin analizinde sayı, yüzde ve ortalama dağılımları kullanılmıştır.

**Bulgular:** Araştırmaya katılan ESH alan bireylerin yaş ortalamasının 61.6±10.4 yıl ve çoğunluğunun kadın olduğu, %50.8'inin evli ve %78.0'inin ailesi ile birlikte yaşadığı, %70'inin ESH'ne çocuklarının başvuru yaptığı saptanmıştır. Hastaların çoğunluğunun (%96.1) evde bakım hizmetlerinden memnun oldukları, mevcut hizmetlerin dışında beklentilerinin olmadığı (%97.6), çoğunluğunun kronik hastalığının olduğu (%80.1) ve dolaşım sistemi hastalıklarının ön planda olduğu, en fazla fizik muayene, kan alma ve pansuman hizmetinden yaralandıkları ve büyük çoğunluğunun yaşlı ve bağımlı hastalardan oluştuğu saptanmıştır.

**Sonuç:** Araştırma sonuçları doğrultusunda ESH'nin özellikle bağımlı ve yarı bağımlı, yaşlı kişilere yönelik planlanması, erken dönemde inme ve kardiyovasküler hastalık risklerine ilişkin koruyucu sağlık hizmetlerinin geliştirilmesi ve rehabilitasyon hizmetlerinin geliştirilmesinin önemli olduğu götürülmüştür.

Anahtar Kelimeler: Evde Bakım Hizmetleri, Evde Bakım, Bolu

#### INTRODUCTION

Home care is a service provided by health professionals and their assistants to an individual or a family in the place where they live in order to ensure health care and supportive care. Home care is a wide and holistic part of the system providing health care, which provides health services to individuals at all stages of life in the places where they live. The aim of home care is to reduce to a minimum the effects of illness and disability and to improve the quality of life by providing the maximum treatment to individuals and their families who have long-term care needs (1, 2).

It is possible in Turkey to obtain these services either from the government or through private institutions. Along with the increasing population, there is an increase in the number of people affected by old age, disability and chronic illness, leading to a serious increase in the demand for after-hospital care services and in health costs. In particular, the unnecessary use of hospital beds by old people and the chronically ill increases the burden on hospitals (3, 4). Health services provided at home will reduce the load on hospitals by, for example, preventing unnecessary health spending, and will allow the more efficient use of bed capacity (5).

In Turkey, on the Rules and Procedures of the Application of Home Health Services (Directive No. 3895) on the provision of home health services by institutions and organizations connected to the Ministry of Health was implemented on 1 February 2010 (6). After this, provision of home health services was started at public hospitals and family health centers. Home care services were defined in the directive as the provision of health and followup care services to meet the medical needs including rehabilitation, physiotherapy psychological therapy of sick individuals in the surroundings where they live with their families by health teams, as recommended by physicians (6). As well as meeting individuals' health needs, individual care needs, needs relating to the surroundings in which the individuals live and their economic and social needs are included. The service must be maintained with interdisciplinary approach with, in addition to the physicians and nurses in the health team expected to provide these services, experts in other fields such as physiotherapists, social service experts and dieticians (7). The scope of home health services has not yet been standardized because the duties of health workers have not been defined and the legal status of authorization and responsibility has not yet been clarified. Despite the publication of this directive, various uncertainties and inconsistencies of application are seen (6). It will only be possible to focus on those who need the service and to increase its quality by such measures as defining to

whom, how often and by what means these services should be provided, to prevent an unnecessary workload.

Studies to be carried out on HHCS must be directed towards the quality and content of the service. With such studies, it is possible to better envisage how this service can be shaped

The aim of this study was to determine the clinical characteristics of the patients served by the Bolu HHCS unit, their reasons for making use of the home care service, and the distribution of service. In this way, studies to provide more comprehensive services can be planned with special patient groups who receive home health care in the future.

#### MATERIAL AND METHODS

**Research Type:** The research was planned as a descriptive.

Research Population and Sample: The population of the study consisted of the 1700 home care patients registered with Bolu Province Health Directorate Home Care Services Unit (HCSU). With a known size of population, the sample size was calculated to reach  $\alpha$ = 0.05 and 95% statistical power, and it was found that a minimum sample size of 378 was needed (8). In the data collection process, 386 home care patients who voluntarily participated in the study were contacted.

**Data Collection:** The questionnaire method was used to collect data from home care patients visited by Bolu Province Health Directorate HCSU between 1 July and 30 September 2019. When it was not possible to communicate with the patients themselves, patient data was obtained from the patients' relatives or care-givers.

**Data Collection Instruments:** A Patient Information Form was used in the collection of research data to obtain descriptive and home carerelated data. The researchers collected the data by the face to face interview technique.

**Patient Information Form:** This form was created by the researchers after a scan of the literature (5-7), and consisted of two sections, one recording sociodemographic characteristics, such as age, gender, education level, marital status and who the patient lived with, use of cigarettes and alcohol, and chronic illness, and the other for characteristics relating to the home care services, such as the reasons for receiving care, diagnosis of illness, use of instruments of assistance, and services provided by the HCSU.

**Evaluation of Data:** Evaluation of the research data was performed with the SPSS (Statistical Package for Social Science for Windows 22.0) package. Descriptive statistical methods, numbers, means and percentage were used in the analysis of data.

**Ethical Aspects of the Research:** In order to conduct the research, written institutional permission was obtained from the Province Health

Directorate to which Bolu Home Care Services Unit is connected, and from the Bolu Abant Izzet Baysal University Clinical Research Ethics Committee (Date/Number=2019/211). Before conducting the interviews, the aims of the study were explained to the participants, and they were assured that their personal information would be kept confidential and that information obtained from them would only be used for scientific purposes, and their written and verbal approval was obtained.

#### **RESULTS**

In this study, 386 individuals receiving home health services (HHS) were contacted. The

mean age of the patients participating in the study was  $66.1\pm10.4$  years, and more than half (51.6%) were aged 80 or older. It was found that 66.8% of the participants were female, 50.8% were married, 55.1% were educated to primary school level, and more than half (59.8%) had SSK health insurance.

Considering the people they lived with, 78% lived with their family, 15.5% with their spouse, and 4.7% with someone who was not an immediate family member. In terms of economic status, 76.9% had an income which was equal to expenditure. Finally, a large majority of 97.7% did not drink alcohol, and 89.9% did not smoke (Table 1).

**Table 1.** Baseline characteristics of participants (n=386)

Variables	(Mean <u>+</u> SD)		
Age (years)	$61.6 \pm 10.4 \text{ (min:} 16 \text{ max: } 99)$		
	Category	n	%
Age group (according to WHO	0-17 years	1	0.2
	18-65 years	61	15.8
categorization)	66-79 years	125	32.4
	80-99 years	199	51.6
Gender	Female	258	66.8
	Male	128	33.2
Marital status	Married	196	50.8
	Single	190	49.2
	Illiterate	132	34.2
	Primary school -Literacy	213	55.1
<b>Education level</b>	Secondary school	32	8.3
	University	9	2.4
	SSK	231	59.8
	Bağ-kur	66	17.1
Health insurance	Emekli Sandığı	60	15.5
	Green card	23	6.0
	None	6	1.6
	Alone	7	1.8
<b></b>	Spouse	60	15.5
Living status	Family	301	78.0
	Not close family	18	4.7
	Income less than expenditure	82	21.2
Income Status	Income and expenditure equal	297	76.9
	Income more than expenditure	7	1.9
Alcohol use	Yes	4	1.0
	No	377	97.7
	Quit	5	1.3
Smoking	Yes	12	3.1
	No	347	89.9
	Quit	27	7.0

Evaluating the degree of relationship of the person applying to the HCSU, it was found that 70% of applications had been made by the participant's children and 10.4% by a neighbor and relatives. Assessing the degree of satisfaction with the HCSU, it was found that 96.1% said they were satisfied, 96.1% said that they had had no expectations of home care services, and that those

with an expectation said they expected to be examined by a specialist (0.9%). During visits, it was found that 97.7% of the patients being followed up did not use the transport vehicle, one patient (0.3%) used it to come to the hospital for an examination, while eight (2.0%) used it because of dependence (breakage, injury, etc.) (Table 2).

**Table 2.** Participants' Descriptive Statistics Regarding the HCSU (n=386)

Degree of relatedness to the applicant to the HCSU*		%
Self	35	9.8
Spouse	35	9.8
Child	350	70.0
Neighbor, relative, etc.	37	10.4
Satisfaction with Home Care Services		
Satisfied	371	96.1
Undecided	14	3.6
Not satisfied	1	0.3
<b>Expectations of Home Care Services</b>		
Doctors would come more frequently/at least once a month	2	0.6
Examination by specialists	3	0.9
Calling before visiting	1	0.3
Providing equipment (air bed, automatic bed, etc.)	2	0.6
None	378	97.6
Use of transport vehicle		
Did not use	377	97.7
To be taken for hospital examination	1	0.3
Because of dependence (breakage, injury, etc.)	8	2.0

<sup>\*</sup>n=357, patient who respond.

It was found when the distribution of disease of the participants was examined that 80.1% had a diagnosis of a chronic illness, 40.7% had hypertension, 24.9% had other cardiovascular diseases, 24.9% had hemiplegia, 19.4% had diabetes, 17.6% had Alzheimer's disease, 10.4% had diseases of the musculo-skeletal system, 9.3% had COPD or asthma, 9.3% had a broken hip, 7.3% had a malignity, 5.4% had a pressure ulcer, and 4.7% had Parkinson's disease. Assessing the

participants' degree of confinement to bed, it was seen that 46.6% were totally bedridden, and 43.6% were semi-bedridden. Also, it was found that 33.4% of patients had two comorbidities, and 15.5% had three or more. The distribution of patients receiving HCS by reason of old age or senility was 31.1%. Examining the feeding of patients receiving HCS, it was seen that 77.2% were being fed orally and 1.7% parenterally, while 21.1% were eating independently by themselves (Table 3).

**Table 3.** Distribution of Disease, Degree of Confinement to Bed and Feeding Status of Individuals Receiving Home Care (n=386)

Chronic illness	n	%
Yes	309	80.1
No	77	19.9
Reason for care/medical diagnosis		
Hypertension	157	40.7
Other cardiovascular diseases	96	24.9
Old age/senility	120	31.1
Hemiplegia/CVO	96	24.9
Diabetes	75	19.4
Alzheimer	68	17.6
Parkinson	18	4.7
Other neurological problems	28	7.3
COPD/asthma	36	9.3
Malignity	28	7.3
Broken hip	36	9.3
Breakage (other)	14	3.6
Herniated disk	8	2.1
Musculoskeletal disease	40	10.4
Pressure ulcer	21	5.4
Kidney diseases (renal failure, prostate, incontinence, etc.)	7	1.8
Disability	7	1.8
Terminal stage	9	2.3
Post-op reasons	5	1.3
Other (fall, accident)	2	0.5
Confinement to bed		
Completely bedridden	180	46.6
Semi-bedridden	168	43.6
Independent	38	9.8
Number of Comorbidities		
One	197	51.1
Two	129	33.4
Three or more	60	15.5
Feeding		
Oral	298	77.2
Parenteral	6	1.7
Able to eat independently	82	21.1

Evaluating the services provided to individuals receiving HCS it was seen that 45.3% had a physical examination, 26.4% had wound dressing, 33.7% had blood taken, 19.9% had a urogenital catheter changed, 19.4% had laboratory tests, 16.6% had a patient diaper report, 16.6% had

an injection, and 14.8% had a medication report prepared. Examining medical equipment in the participants' homes, it was seen that 11.1% used hospital beds, 1.8% used nebulizers, and 1.5% used oxygen cylinder or concentrators (Table 4).

**Table 4.** Distribution of services provided by the HCSU team, and the equipment used (n=386)

	n	%
Services		
Physical examination	175	45.3
Wound dressing	102	26.4
Taking blood	130	33.7
Changing urogenital catheter	77	19.9
Laboratory tests	75	19.4
Patient diaper report	64	16.6
Medication report	57	14.8
Air bed report	22	5.7
Injection	64	16.6
Visit	43	11.2
Nasogastric catheter	5	1.3
Psychologist	5	1.3
Medical equipment used in		
patients' homes		
Hospital bed	43	11.1
Oxygen cylinder or concentrator	6	1.5
Nebulizer machine	7	1.8
Mechanical ventilator	2	0.5
None	328	85.1

#### DISCUSSION

In order to raise the health level of home care services, patients are provided with health care in the home environment. The age group at which this service is directed are reported to be mostly those aged 65 and older who are chronically ill and need long-term care (2), and studies have reported that most of those receiving health services at home are individuals aged over 60 (9-11). According to data from the Turkish Statistics Institute, by 2023 the number of people aged 65 and older will be 8.6 million, rising to 10.2% of the total population (12). These projections show that Turkey is one of the countries in the world with an aging population. The steady increase in the aged population in this country, the consequent increase in chronic illness and the increase in early discharge from hospital increase the need for home care services (9, 13, 14). A majority of the patients in this study receiving services were aged 65 or older and had chronic illnesses, and these findings support the literature.

In the study, most of the individuals receiving HCS were female. Evaluating the gender distribution of persons receiving HCS conducted in Turkey, it is seen that more females receive home health services (11, 14-16). According to the WHO, a large part of the aged population consists of women, and it reports that in the 60 and over age group the life expectancy of women is greater than that of men (17). In a study in 2019 of the increase and mobility of the population of Bolu province, it was reported that the number of aged dependent women surpassed that of men to a remarkable

degree (18). For this reason, it is seen as an expected result that women would benefit more from home care services. That nearly all the participants in the study had health insurance and that the income and expenditure of three quarters was assessed as equal may be seen as a positive result from the point of view of meeting treatment costs.

It was found that most of those in the study receiving HCS lived with their families, and it was mostly their children who had made the application to the home care services unit. In a study by Doğan (2019), it was reported that the care-giving load of the relatives of patients receiving home care services was at a medium or high level (19). In a study by Aşiret and Çetinkaya on the relatives of patients receiving in-patient hospital treatment, it was found that 70.5% of care-givers wished to make use of HCS, with the most demand for support for care and treatment (20). This supports the need of those receiving HCS for support in care.

When expectations of home care services were examined, most (97.6%) of those participating in the study stated that they had no expectations, but most said that they were satisfied with HCS. If patients are pleased with the home care service provided, it's an indicator that their expectations are being met. The eight people with expectations stated that they wanted more frequent visits, examinations from specialists, and provision of equipment. In studies in Turkey on the use of home health services and needs, it is observed that patients' medication prescriptions were made, drug reports were drawn up, equipment was procured and patient care was carried out (5, 21, 22). In studies by Yeşiltaş and Adıgüzel (2016) and Işık et al. (2016), it was found, similar to our study, that patients' relatives were generally satisfied with HCS (23, 16).

Home care services include psychosocial, physiological and medical support services and social services provided to individuals to achieve social integration and lighten the burden on family members of those in need of care by supporting in their own environment individuals who are old, disabled, chronically ill or in the process of recovery (24-25). It was observed that most of those receiving HCS in this study were chronically ill, had at least one comorbidity, and were confined to bed. In studies examining the profiles of patients receiving HCS in this country, it has been found that between 40% and 99% have chronic illnesses (11, 20, 23), and between 27% and 52% are totally dependent (11, 26-28). The four main reasons for care and the medical diagnoses in this study were, in order, cardiovascular diseases, hemiplegia, diabetes and Alzheimer's disease. In studies by Catak et al. (2012) and Eker et al. (2019), hypertension and stroke were, similar to this study, first in order, while in studies by Subaşı and Öztekin'in (2006), Yörük et al. (2012), Tuna et al.

(2012), Enginyurt and Öngelin (2012), Hisar and Erdoğdu (2014), Karaman et al. (2015), and Yeşiltaş and Adıgüzel (2016), neurological diseases (stroke, CVO, hemiplegia) were first, with cardiovascular diseases second. In a study by Aslan et al. (2018) evaluating the service provided under the home care services of the Ministry of Health in Turkey in general, neurological diseases, with a 38% share of visits, came first in order. Evaluating the conclusions of that study and the findings of the present study, it is seen that plegia because of CVO and diseases affecting the brain were first, followed by HT, which is a major risk factor for stroke, and cardiovascular diseases. Based on all of these findings, it is seen that diseases of the circulatory system and advancing age increase confinement to bed and the need for care, and constitute the main demand for HCS. According to the results of the study on the Frequency of Chronic Diseases and Their Risk Factors in Turkey (2013), coronary heart diseases increase with age, and it is reported that in the Western Black Sea Region the frequency is high in women, and that the frequency of CVO in this region is high in men. In the same study, it is seen that heart attack is the main cause of death. The results of the present study support these findings (32).

Examining the feeding of the patients receiving HCS in this study, it was seen that majority of the patients were taking food orally but with support. It is thought that this derives from the fact that most of the patients were old, dependent, and chronically ill. It has been reported that old people receiving HCS tend to be undernourished for reasons of chronic mental or physical illnesses (11, 33). Neurological problems seen with aging and increased dependence cause eating problems in old people (27). In a study by Aşiret and Çetinkaya (2016) on patients receiving HCS and their relatives, it was seen that 65% of patients were supported in eating. In a study by Taşdelen and Ateş (2012), it was found that 13.6% of patients receiving HCS were fully dependent on the caregiver for eating, and 74% were semi-dependent.

The results of the present study were found to be similar to the literature.

Investigating the distribution of the health services given to those included in the study, it was found that the most frequent three were, in order, physical examination, wound dressing and taking blood. Assessing the services provided under the home health services of the Ministry of Health in Turkey as a whole, the services most frequently performed by the HCS unit are, in order, patient examination, wound dressing, education, taking blood for testing, inserting a urinary catheter and giving injections (10). In the study by Çatak et al. (2012), 46.3% of patients receiving home care services stated that they received a physical examination and were started on drug treatment. It is thought that the fact that most of those included in the study were old and dependent and had at least one comorbidity was the reason why they had a greater need for physical examinations.

#### **CONCLUSION**

In this study, performed to determine the clinical characteristics of patients receiving home care services, the reasons why they make use of home care services, and the distribution of services, it was found that most of the patients were satisfied with the home care services, they did not have expectations beyond the services currently provided, most had a chronic illness, principally diseases of the circulatory system, they made the most use of physical examination, blood collection and wound dressing services, and most were old and dependent. In line with these results, it is seen as important that home health services should be planned for older people, particularly those who are dependent or semi-dependent, home health services should be extended, studies should be planned with more inclusive groups of patients receiving home health care, in Bolu province, cardiovascular and neurological diseases should be included in a plan of health services to be provided, protective health services should be developed against the risks of early stage stroke and cardiovascular disease, and rehabilitation services should be improved.

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