



## Development of Home Health Services for Patients with Prostate, Kidney, and Adrenal Cancer in Türkiye

### Türkiye’de Prostat, Böbrek ve Adrenal Kanseri Hastalara Yönelik Evde Sağlık Hizmetlerinin Geliştirilmesi

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#### ABSTRACT

**Objective:** Cancer detection rates are on the rise because of advances in technology, more widely used imaging methods, and the widespread implementation of screening tests. While the increase is more noticeable among early stage cancers, there has also been an increase in metastatic stage patients. This study evaluated the distribution of patients receiving home health care services (HHC) for urologic cancers, including prostate, kidney, and adrenal cancers, over the course of several years.

**Methods:** This study evaluated the number of patients who received HHC services for prostate, kidney, and adrenal cancer between 2011 and 2017. The number of patient visits and service teams was also assessed.

**Results:** This study evaluated the number of patients who received HHC services for prostate, kidney, and adrenal cancer between 2011 and 2017. The study found an increase in service teams, from 593 in 2011 to 662 in 2017, operating across 81 provinces in the country. Between 2011 and 2017, there was an increase in the number of patients diagnosed with urological malignancies, primarily prostate cancer. In 2011, 1,407 patients were treated, whereas in 2017, 13,007 patients were treated. The increase in this figure was attributed to improved diagnoses, heightened HHC awareness, and increased healthcare services.

**Conclusion:** It is worth noting that urological malignancies are on the rise globally, and this trend is also observed in our country. Routine home visits for patients undergoing active or palliative treatment are crucial for the follow-up and seamless continuation of care. In this group of patients, particularly those in advanced stages, physical limitations and contact with other patients make it challenging to attend hospital appointments. As such, raising awareness is key to expanding access to a broader pool of patients.

**Keywords:** Home health services, urooncology, urologic cancers

#### Öz

**Amaç:** Teknolojideki ilerlemeler, görüntüleme yöntemlerinin ve tarama testlerinin yaygınlaşmasıyla kanser tespit oranları artmaktadır. Bu çalışmada, prostat, böbrek ve adrenal kanserler de dahil olmak üzere ürolojik kanserler için evde sağlık hizmetleri (HHC) alan hastaların yıllara göre dağılımlarının değerlendirilmesi amaçlandı.

**Yöntemler:** Bu çalışmada 2011-2017 yılları arasında prostat, böbrek ve adrenal kanser nedeniyle HHC hizmeti alan hastalar değerlendirildi. Hasta ziyaretleri ve servis ekiplerinin sayıları değerlendirilmeye alındı.

**Bulgular:** Ülkemizde 81 ilde faaliyet gösteren hizmet ekiplerinin sayısının 2011’de 593 iken bu sayının 2017’de 662’ye yükseldiğini gözlemlendi. 2011-2017 yılları arasında başta prostat kanseri olmak üzere ürolojik malignite tanısı konulan hasta sayısında artış saptandı. 2011 yılında 1.407 hasta tedavi edilirken, 2017 yılında 13.007 hasta tedavi edildi. Bu rakamdaki artış, iyileşen teşhislere, artan HHC farkındalığına ve artan sağlık hizmetlerine bağlıdır.

**Sonuç:** Ürolojik malignitelerin dünya çapında artış gösterdiğini ve bu eğilimin ülkemizde de gözlemlendiğini belirtmekte fayda vardır. Aktif veya palyatif tedavi gören hastaların rutin ev ziyaretleri, hasta takibi ve bakımın sorunsuz devamı açısından büyük önem taşıyor. Bu grup hastalarda, özellikle de ileri evrelerde, fiziksel kısıtlılıklar ve diğer hastalarla temas, hastane randevularına gitmeyi zorlaştırıyor. Bu nedenle, farkındalığın artırılması, erişimin daha geniş bir hasta havuzuna genişletilmesinin anahtarıdır.

**Anahtar Sözcükler:** Evde bakım hizmetleri, üroonkoloji, ürolojik kanserler

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## INTRODUCTION

With advancements in cancer diagnosis and treatment, an increasing number of patients are being diagnosed at an early stage and receiving more effective treatments. Cancer patients undergo several hospital visits for diagnosis and treatment. In tertiary hospitals with a high patient volume, routine patient controls intensify the workload. In addition, patients facing the challenge of visiting hospitals for routine check-ups encounter difficulties and an increased risk of infection, particularly immunosuppressed ones.

The aim of home health care services (HHC) is to provide examination, analysis, treatment, and medical care, including rehabilitation, to patients in need within their own homes and family environment. In addition, social and psychological support services are offered to both patients and their family members as a whole. This ensures comprehensive care and promotes a comfortable and familiar environment for patient recovery. Technical terms will be explained upon first use, and the language will remain objective, formal, and free from biased or emotional language. The text adheres to all conventional academic structures and guidelines, with impeccable grammatical correctness, precise word choice, clear logical progression, and causal connections between statements. Since 2011, the Ministry of Health has been offering Home Health Services (HHS) to provide examination and manipulative medical services for patients in the comfort of their homes.

Urologic cancers include cancers of the kidney, adrenal gland, urinary tract, and genital organs, such as the prostate and testicles. According to 2019 data from the United States, 4 out of the 7 most prevalent cancer types in men are urologic cancers (1). Prostate cancer is the most common cancer in men. The incidence of urologic malignancies is increasing every year because of the growing elderly population worldwide. As the number of patients increases, the costs associated with patient follow-up during and after treatment also increase. Home care services can provide patients with closer monitoring while also reducing costs.

The objective of this study was to analyze the yearly growth of HHS for urologic malignancies in our country, which have become increasingly popular worldwide. The methodology employed in this study is outlined in the following section.

## MATERIALS AND METHODS

We conducted analyzing services provided from 2011 to 2017 using data from the Ministry of Health's HHC institution. Our institution was granted the necessary permissions from the Ministry of Health to conduct the study. The study evaluated the number of patients reached, visits made, and teams providing services through the HHC program for those diagnosed with prostate, kidney, and adrenal malignant neoplasms during the specified period.

### Ethical Statton and Data Security

Data security was assured by the Ministry of Health. An official application was made to the Turkish Republic Ministry of Health

(April 16 2018). This study was approved by special permission of the Ministry of Health/Türkiye (April 24 2018, protocol number of the documents 32693113). Therefore, approval of the ethical committee was not required.

## RESULTS

Cancer patients are frequently referred to HHC because of their advanced age, physical disabilities caused by the disease, and the need to live in isolation because of immunosuppression. Although neurological, psychiatric, cardiovascular, and orthopedic diseases represent the most common conditions among patients who apply to this service, cancer cases rank fourth. In 2011, EBH began with 593 teams in 81 provinces. By 2017, the number of teams had grown to 662. The number of treated patients has increased annually to 1,127,904 patients in 2017 (Table 1).

Analysis of patients who received HHC for prostate, kidney, and adrenal malignancies revealed that the group with the highest number of patients each year was those with prostate cancer. In 2011, 1,302 patients with prostate cancer were treated, whereas this number increased to 12,125 in 2017. Similarly, the number of patients diagnosed with kidney cancer increased from 95 in 2011 to 806 in 2017. Among these three malignancies, those with adrenal malignancy, which has the lowest incidence, were the least common patient group. As expected, only 10 patients were treated in 2011, but this number increased to 76 in 2017 (Table 2). Figures 1-3 presents the distribution of diseases in those years.

## DISCUSSION

Cancer patients have a particularly high need for palliative care. The number of available palliative care beds in the country has increased, but it is still insufficient for this patient population (2). Furthermore, given their extended treatment periods and mental health needs, it is recommended that these patients be allowed to spend more time with their families (3). Accordingly, HHC staff offer in-home services for conducting exams and treatments of patients, eliminating the need for hospital visits. The team comprises physicians, nurses, and auxiliary medical personnel. Patients can schedule appointments by calling specific phone numbers or through the HHC hospital units. They may also receive at-home services if deemed necessary. Routine blood and urine tests, and simple invasive and non-invasive procedures, can be conducted off-site. without the need for hospital admission.

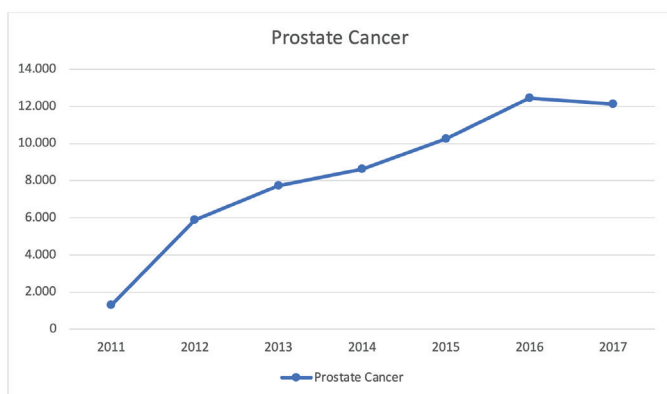
The high cost of healthcare worldwide, particularly in both Europe and the USA, has led to an increase in the establishment of HHC institutions in the early 2000s. These institutions have attracted attention because of their contribution to reducing healthcare expenditures. Brumley and Enguidanos (4) found that HHC significantly reduces healthcare expenditures in the American healthcare system. according to their cost analysis.

**Table 1.** Home health care service team count and patient numbers reached by year

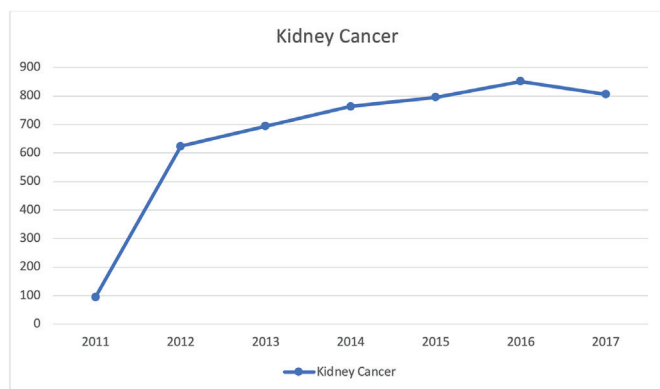
	2011	2012	2013	2014	2015	2016	2017
Number of home health service units	593	628	685	711	721	716	662
Total number of patients reached	124,335	246,802	380,792	510,352	693,522	908,136	1,127,904

**Table 2.** Number of patients receiving home health care for prostate, kidney, and adrenal cancers, categorized by years

	Prostate cancer	Kidney cancer	Adrenal cancer	Total
2011	1,302 (92.5%)	95 (6.7%)	10 (0.8%)	1,407
2012	5,885 (90.2%)	624 (9.5%)	16 (0.3%)	6,525
2013	7,738 (91.4%)	694 (8.2%)	32 (0.4%)	8,464
2014	8,632 (91.2%)	763 (8.0%)	69 (0.8%)	9,464
2015	10,263 (92.1%)	796 (7.1%)	88 (0.8%)	11,147
2016	12,449 (93.0%)	851 (6.3%)	88 (0.7%)	13,388
2017	12,125 (93.2%)	806 (6.1%)	76 (0.7%)	13,007

**Figure 1.** Patients receiving HHC for prostate cancer.

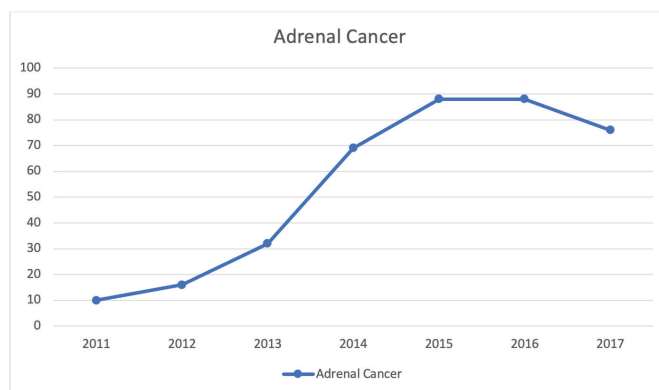
HHC: Home health care services.

**Figure 2.** Patients receiving HHC for kidney cancer.

HHC: Home health care services.

By using HHC, patients in need of palliative care can avoid unnecessary examination costs during hospitalization, as well as morbidity and additional treatment costs stemming from potential hospital-acquired infections. Furthermore, patients face psychological distress because of lengthy hospital stays, and healthcare services can be incomplete due to the bed-blocking of patients in need of real beds (5). These issues have brought about a new global trend in healthcare reform known as HHC.

According to the Palliative Care Outcome Scale test, which evaluates healthcare effectiveness, HHC proved to be more successful than the outpatient clinic's service (6). Specifically, it was determined that

**Figure 3.** Patients receiving HHC for adrenal cancer.

HHC- Home health care services.

providing care in a setting where patients do not feel disconnected is psychologically advantageous for chronic symptoms, particularly pain. Significant improvements were observed in symptoms, including shortness of breath, sleep disorders, nausea, vomiting, diarrhea, constipation, and loss of appetite. Patient satisfaction was the highest during the initial 30 days of service provision.

Fredheim et al. (7) found that elderly patients and those with cancer expressed the highest levels of satisfaction with HHC treatment. Meanwhile Rabow et al. (8) reported that patients who received regular HHC had fewer emergency room and outpatient clinic visits and experienced more regular use of medication, or a decrease in medication usage. In advanced stages of HHC, medications can only be regulated by establishing a telephone connection, which can prevent unnecessary examinations.

Variation in services can be attributed to demographic differences between countries. In Mediterranean countries like ours, visual contact and mutual meetings are important, and patients generally prefer the healthcare team to remain unchanged and to maintain regular visual contact. Therefore, while phone consultations are infrequently used in our country, other HHC services can still be provided regularly.

### Study Limitations

The absence of a control group for comparative analysis and the lack of bladder cancer-specific data, which frequently occurs in urologic practice, are notable limitations of our study.

### CONCLUSION

We assessed the efficacy of using HHC services in a patient population diagnosed with urologic cancer. As mentioned in the findings section, patients with prostate cancer benefit greatly from HHC services, which coincides with the rise in prostate cancer incidence. By strengthening health policies to support HHC, the quality and diversity of these services will improve. This will increase awareness among health personnel and patients, and over time, the amount of trained personnel will also increase. National studies are necessary to assess the quality, economic impact, and effectiveness of treatment for symptom compromise while ensuring the efficient use of resources. These findings will inform a more successful provision of services.

### Ethics

**Ethics Committee Approval:** This study was approved by special permission of the Ministry of Health/Türkiye (April 24 2018, protocol number of the documents 32693113). Therefore, approval of the ethical committee was not required.

**Informed Consent:**

**Peer-review:** Externally peer-reviewed.

### Authorship Contributions

Concept: F.G., E.Ö., NY., Design: F.G., E.Ö., NY., Data Collection or Processing: F.G., E.Ö., NY., Analysis or Interpretation: F.G., E.Ö., NY., Literature Search: F.G., E.Ö., NY., Writing: F.G., E.Ö., NY.

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

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