

Veteran's Affairs Home Based Primary Care

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KEYWORDS

- Home care • Chronic disease
- Non-institutional long-term care • Interdisciplinary team
- Home based primary care

The changing demographics of the American population are a source of concern for health care economists and policymakers. The population of Americans older than 85 years is projected to increase 44% between the years 2000 and 2010. During these same 10 years, the number of veterans older than 85 years actually doubled in the first 5 years and is projected to nearly triple, increasing 190% by 2010.¹

This means that the VA has been facing the challenges of a burgeoning older population a decade earlier and with a sharper increase than the rest of the nation. Fortunately, many bright and dedicated individuals within the VA anticipated this challenge and have been preparing the VA for the care of this elderly population for decades.

With the increase in aging population comes not only an increase in the numbers but also an increase in prevalence of associated disease and disability. Nearly half of all Americans older than 85 years are dependent in at least one activity of daily living. This includes bathing, dressing, toileting, transferring, and feeding. In addition, nearly half of Americans older than 85 years have dementia, greatly increasing the need for daily assistance. In response to these demographic changes, the VA created a spectrum of programs to provide services to this unique population. These programs are designed to meet the needs of individuals who are developing increasing complexity in their health care and impaired functional status. This article focuses on the VA's program called HBPC, a home care program that specifically targets individuals with complex chronic disabling disease, with the goal of maximizing the independence of the patient and reducing preventable emergency room visits and hospitalizations.

The costs of chronic disease are substantial, with two-thirds of Medicare dollars being spent on 10% of beneficiaries, most of whom have five or more chronic conditions. The VA turns to those with special expertise in the care of complex chronic disease, particularly individuals who have training and expertise in geriatrics. HBPC

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targets patients with complex chronic disabling disease and uses an interdisciplinary team of these geriatric-skilled practitioners to provide comprehensive longitudinal primary care in the homes of veterans for whom routine clinic-based care is not effective. HBPC provides cost-effective primary care in the home, which may include palliative care, rehabilitation, disease management, and coordination of care.

The VA established the Hospital Based Home Care (HBHC) program with six sites in 1972. The program continued to add sites, but practice variations developed, including the degree of physician involvement in interventions and plan of care. In 1995, the VA changed the name of the program from Hospital Based Home Care (HBHC) to Home Based Primary Care (HBPC) and clarified the intent to deliver comprehensive primary care in the home. The new program standards delineate the responsibility for primary care, team composition and the roles of the interdisciplinary team's members, the selection criteria for the target population with advanced chronic diseases and disabilities, and the type and number of staff appropriate for the care of a specific number of patients. In the new HBPC model, HBPC becomes the primary care provider. This role is fulfilled by the HBPC medical director alone or in collaboration with a midlevel nurse practitioner or physician assistant. The frequency of physician home visits depends on the composition and structure of the team.²

It is important to understand the differences between HBPC and other home care systems. Notably, HBPC is different from and complementary to Medicare home health agency care. The differences are in the target population, in the processes of care, and in the outcomes (**Table 1**).

HBPC selectively targets individuals with complex chronic disease, whereas Medicare home care often serves persons with remediable and short-term conditions. HBPC provides comprehensive primary care, whereas Medicare home care is designed to provide problem-focused skilled care. HBPC is routinely provided through an interdisciplinary team; Medicare home care is generally provided by one provider or a series of individuals with relatively little team integration. HBPC often provides longitudinal care for months or years; Medicare home care is increasingly focused on episodic postacute care. HBPC is strongly associated with a reduction in inpatient days and total cost of care, whereas an extensive analysis of Medicare home care identified no significant impact on hospital days or total cost of care.³⁻⁵

HBPC provides longitudinal comprehensive interdisciplinary care to veterans with complex chronic disease. The HBPC population has a mean age of 76.5 years.

Table 1	
Differences between VA HBPC and Medicare skilled home care	
VA HBPC	Medicare Skilled Home Care
Targets chronic disease	Targets remediable conditions
Comprehensive primary care	Problem-focused care
Interdisciplinary team every time	One or multiple disciplines
Homebound not strictly required	Must be homebound
Skilled care not required	Requires skilled care need
Longitudinal care	Episodic, postacute care
Accepts declining status	Emphasizes improvement
Reduces hospital days	No definitive impact
Limited geography and intensity	Anywhere and anytime

Abbreviations: HBPC, Home Based Primary Care; VA, Department of Veterans Affairs.

Because this is an older veteran population they are 96% men; this predominance of men is shifting somewhat as there are more women in the newer generations of veterans. Of the patients enrolled in HBPC, 47% are dependent in two or more activities of daily living. Nearly half of the veterans in HBPC are married, and of those, one-third of the spousal caregivers have limitations in their activities of daily living. Therefore, the care of these veterans and maintaining them in their homes become progressively greater challenges. The HBPC veterans have a high prevalence of chronic disease, each having on average more than eight hierarchical chronic conditions. In 2007, 72% of the veterans had heart disease, 48% had diabetes, 35% had heart failure, and at least one-third had dementia. Another 29% had cancer, and nearly one in five had chronic lung disease. The HBPC population also has a high prevalence of stroke, with residual deficits, Parkinson's disease, and other neurologic conditions. HBPC is not restricted by age, and a substantial proportion of veterans have underlying neurologic disease, such as multiple sclerosis, that may make them appropriate candidates for HBPC at a relatively early age.^{6,7}

Because of the population targeted and enrolled in HBPC, the goals are very different from those of skilled care in the home. Goals of care for HBPC patients as outlined in the 2007 Veterans Health Administration (VHA) HBPC Handbook are enumerated in the following list.

GOALS OF HBPC

1. Promoting the veteran's maximum level of health and independence by providing comprehensive care and optimizing physical, cognitive, and psychosocial functions.
2. Reducing the need for, and providing an acceptable alternative to, hospitalization, nursing home care, and emergency department and outpatient clinic visits, through longitudinal care that provides close monitoring, early intervention, and a therapeutic safe home environment.
3. Assisting in the transition from a health care facility to the home by providing patient and caregiver education, guiding rehabilitation and use of adaptive equipment in the home, adapting the home as needed for a safe and therapeutic environment, and arranging and coordinating supportive services, including home telehealth, as appropriate.
4. Supporting the caregiver in the care of the veteran.
5. Meeting the changing needs and preferences of the veteran and family throughout the course of chronic disease, often through the end of life.
6. Enhancing the veteran's quality of life through symptom management and other comfort measures.
7. Allowing the veteran the option of dying at home rather than in an institution.
8. Helping the veteran and family cope with all elements of chronic disease.
9. Promoting an enduring network of skilled home health care professionals by providing an academic and clinical setting for health care trainees to experience interdisciplinary delivery of primary care in the home.

As can be seen, these HBPC goals are all inclusive of care of the patient in the home to include close monitoring possibly using telehealth, a therapeutic safe home environment, support of the caregiver, palliative care, and the option of death at home. HBPC personnel are able to provide primary care, chronic disease management, physical therapy, social work intervention, nutrition management, home safety evaluation, ongoing case management, and, more recently, mental health services. Via

collaboration with other VA programs, such as contracted skilled care, adult day health care programs, homemaker, home health aide, and home hospice, HBPC is able to help provide the patient and family with much needed services, which often make a difference in the patient being able to remain in the home. Briefly stated, HBPC meets the changing needs and preferences of the veteran and family throughout the course of chronic disease, often through the end of life.

Additional operational details distinguish HBPC from other models of home care. Veterans are enrolled in HBPC longitudinally, on average for more than 315 days, in contrast to Medicare home care, in which episodes of care average 65 days. HBPC patients average slightly more than three visits per month from the combination of all interdisciplinary team members. HBPC enrollment does not require a skilled care need, does not require strict homebound status, and can continue providing comprehensive home care despite declining status. Medicare home care requires a skilled care need, it serves only homebound persons, and, for continued rehabilitative therapy, there must be demonstration of progress toward a defined goal. Since HBPC targets individuals with complex chronic and progressively debilitating disease, many patients are not expected to improve, and they have continuous care needs often until the end of life. VA HBPC teams are successful if they slow the decline of these patients with advanced chronic diseases and allow them to remain in their homes as long as possible. HBPC is interdisciplinary, requires that teams meet regularly, and develops a single unified care plan for the team.

Because of the design of its services, HBPC is limited in geography and service intensity. HBPC programs have geographic restrictions because the team is based at a facility—generally a VA hospital. For that reason, the area of coverage tends to range 30 to 70 miles from the facility. Therefore, many areas in the country do not have coverage by HBPC. Additionally, if an individual needs home visits more than once a day or even multiple times a week for a prolonged period, the HBPC program cannot meet that intensity of service. Medicare home care can reach patients nearly anywhere and provide services at any time. Through the complementary nature of these programs, if a veteran needs services that are beyond the scope of the HBPC team, VA uses skilled services either through Medicare or through VA contract payment in a concurrent fashion with HBPC, being careful to avoid duplication of services.

HBPC uses a highly interdisciplinary approach involving a diverse array of professionals who are required to effectively manage the complex health problems of chronically or terminally ill patients. The core team is composed of a physician, nurses, social worker, rehabilitation therapist, pharmacist, dietitian, and recently a psychologist. The registered nurse functions as a case manager who continually assesses the patient's needs and delivers home nursing care. The midlevel provider has primary medical management responsibility in conjunction with the supervising physician. The social worker assesses interpersonal resources and relationships of the veteran, family, other caregivers, and their support systems and helps maximize available VA and non-VA resources. The dietitian performs ongoing assessment of nutritional status, recognizing the important role of nutrition in the management of chronic conditions, and provides individualized guidance to improve the patient's condition or prevent exacerbations. The rehabilitation therapist assesses functional status, evaluates the home for structural modifications needed to make the home safe and accessible, determines need for home medical equipment, and establishes a therapeutic program to maximize functional independence. The pharmacist assesses medication therapy; identifies adverse events, risks, discrepancies, noncompliance, and duplications; educates the veteran and caregiver regarding proper use of medications;

participates in team meetings; educates staff on medication interactions and uses; and recommends regimen changes.³

In 2002, the VA conducted a national analysis of the use of HBPC and cost for the veterans who received care in HBPC. This analysis compared the 6 months before enrollment in HBPC with the next 6 months during HBPC. The results from 11,334 veterans in HBPC included reduction in hospital bed days of care by 62%, reduction in nursing home bed days of care by 88%, and an increase in all home care visits by 264%. The mean total VA cost of care dropped 24%, from \$38,000 to \$29,000 per patient per year. Building on this study, in 2006 the VA implemented a quality measure for HBPC that continually assesses the impact of HBPC on reducing inpatient use, comparing VA hospital and nursing home use during HBPC to the 6 months before enrollment in HBPC.

Enrollment in HBPC for fiscal year 2007, was associated with a 59% reduction in hospital bed days of care, an 89% reduction in nursing home bed days of care, and a combined reduction of 78% in total inpatient days of care. Enrollment in HBPC was also associated with a 21% reduction in 30-day hospital readmission rates. Notably, the 79% reduction in total inpatient days is greater than the 29% reduction in inpatient admissions. This difference implies that HBPC is effective not only at reducing the frequency of hospitalizations but also at shortening the length of hospital stays. The VA is in the process of determining which factors have the strongest association with reduction in inpatient days. While further analysis continues, the initial findings indicate that the specific program characteristics that are linked with the greatest reduction in inpatient days include targeting individuals with multiple comorbidities and multiple prior hospitalizations, home visits by the HBPC team physician, nurse practitioner, or physician assistant, interdisciplinary team experience, and smaller caseloads.^{8,9}

The VA recognizes that there is a high prevalence of mental illness and behavioral conditions among the veteran population in HBPC. Of HBPC patients, 44% have depression, 29% have substance abuse, 24% have anxiety or personality disorder, 21% have posttraumatic stress disorder, and 20% have schizophrenia.² Each of these conditions greatly adds complexity to the effective management of individuals with chronic disease. It is critically important that mental health is addressed in the overall management of individuals with chronic disease. As a result of this recognition VA established mental health positions in HBPC and now has a mental health provider, generally a psychologist, in every HBPC program in the country. Many programs are adding more mental health staff because of the prevalence of mental disease and the great demand for their services. These mental health providers routinely make home visits and are an integral part of the interdisciplinary team. It is believed that this is an important aspect of home care for persons with complex chronic disabling disease, and it is sought to establish this as a standard of practice in home care for all health care systems.

The Congressional Budget Office (CBO) published a report in December 2007 on the costs of health care from 1998 through 2005, comparing costs within VA to costs under Medicare.⁸ In these 7 years, the annual cost of health care per patient within the VA rose 1.7% or 0.3% per year, whereas the cost within Medicare rose 29% or 4.4% per year. The CBO identified the highest cost sectors to be those with patients who had advanced chronic disease and were homebound. They suggested that the three factors most likely to contribute to VA's success in controlling health care costs were (1) the electronic medical record; (2) the system being driven strongly by quality and performance measures; and (3) programs that are specifically designed for the management of chronic disabling disease. VA HBPC is one of these programs.

Home care for chronic disease is not effective as an episodic inoculation. Effective home care for persons with complex chronic disease must be comprehensive, not problem-focused. It must be longitudinal, not episodic. It must be interdisciplinary, not delivered by one or two providers. Moreover, it must integrate primary care. If complex chronic disabling disease is the question, home care is the answer, and the VA HBPC experience now provides the United States with substantial evidence to support this view.

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