

# BASIC STATISTICS ABOUT HOME CARE

Updated 2007



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Home care is a diverse and dynamic service industry that began in US in the 1880's. Approximately 7.6 million individuals currently receive care from 17,700 providers because of acute illness, long-term health conditions, permanent disability, or terminal illness.<sup>1</sup> In 2005, annual expenditures for home health care were projected to be \$53.4 billion.<sup>2</sup>

### HOME CARE PROVIDERS

“Home care organizations” include home health care agencies, home care aide organization, and hospices. Some of these organizations are Medicare certified, which allows providers to bill Medicare for reimbursement. Agencies that are not Medicare certified cannot be reimbursed through Medicare.

#### ***Medicare-certified Agencies***

While home care agencies have been providing services to Americans for more than a century, Medicare's 1965 enactment accelerated the industry's growth by covering home health care services for the elderly.

Services were then extended to certain disabled Americans in 1973. Between 1967 and 1985, Medicare-certified agencies grew more than three-fold (1,753 to 5,983); however, in the mid-1980s, Medicare-certified home health care agencies reached a plateau (approximately 5,900) due to Medicare administrative burden and unreliable payments. This led to a 1987 lawsuit brought against the then-Health Care Financing Administration (HCFA) by US Representatives Harley Staggers (D-WV) and Claude Pepper (D-FL), consumer groups, and the National Association for Home Care (NAHC). The successful lawsuit gave NAHC the opportunity to participate in rewriting Medicare coverage policies, which significantly increased Medicare's annual home care outlays, and the number of agencies rose to over 10,000. Prior to clarifications in coverage, public health agencies dominated the ranks of certified entities. After that, the number of hospital-based and freestanding proprietary agencies grew faster than any other types of organizations. Currently, nearly 56 percent of agencies are freestanding proprietary agencies 18 percent are hospital-based. Table 1 (see Appendix A) shows the changes over time in types of agencies participating in Medicare.

<sup>1</sup> U.S. Census Bureau, 2002 Economic Census ([www.census.gov](http://www.census.gov)) (October 2004).

<sup>2</sup> Centers for Medicare & Medicaid Services, Office of the Actuary (February 2007).



By the end of 2001, the number of Medicare-certified home health agencies declined to 6,861. NAHC believes the 30.4 percent decline in agencies between 1997 and 2001 can be attributed to changes in Medicare home health coverage and reimbursement enacted as part of the Balanced Budget Act of 1997 (BBA) (P.L. 105-33). With the advent of the home health prospective payment system (PPS) in 2000, financial stability returned, and the number of agencies rebounded to 8,838 by the end of 2006.

### **Medicare-certified Hospices**

Medicare added hospice benefits in October 1983, 10 years after the first hospice opened in the US. Hospices provide palliative care and social, emotional, and spiritual support services to terminally ill patients and their families. The number of Medicare-certified hospices has grown from 31 in 1984 to 3,078 as of December, 2006.

### **Non-Medicare-certified Agencies**

Because of variation in licensing and oversight among states, it is difficult to assess the number of non-certified agencies. Non-certified home care agencies, home care aide organizations, and hospices that remain outside of Medicare do so for a variety of reasons. For example, some do not provide the breadth of services that Medicare requires, such as home health aide organizations that do not provide skilled nursing care.

## **HOME CARE EXPENDITURES AND UTILIZATION**

The Centers for Medicare & Medicaid Services (CMS) projects that total national expenditures for health care in 2006 were \$2.1 trillion (16.0 percent of the gross domestic product) and is

anticipated to increase to 19.6 percent by 2016.<sup>3</sup>

One factor contributing to changes in health care spending is the implementation of Medicare Part D in 2006. This program will contribute to a major shift in the sources of payment for prescription drugs, as spending is transferred from Medicaid and private funding to Medicare. Consequently, anticipated growth rates for public and private spending in this year's prediction are very different. For instance, growth in public personal health care spending in 2006 was projected to climb almost 10 percent while personal out-of-pocket spending is expected to steadily decline from 12.5 percent in 2005 to less than 11 percent by 2016.<sup>4</sup>

Figure 1 provides projected 2006 national expenditures for personal health care by type. Of the almost \$1.3 trillion attributed to personal health care spending in 2005, only a small fraction (approximately 3 percent) was spent on freestanding home care. (Hospital-based home care is included with hospital expenditures.)

Total home care spending is difficult to estimate due to limitations of data sources. HCFA, now CMS, estimated total spending for home care to be \$34.5 billion in 1997, \$30.6 billion in 2000, and \$47.5 in 2005.<sup>5</sup> The decline in 2000 was largely the result of decreases in Medicare home health outlays. These estimates do not include spending for home care services that are unavailable in the national health accounts data; for example,

<sup>3</sup> Poisal, John S., C. Truffer, S. Smith, A. Sisko, C. Cowan, et al. "Health Spending Projections Through 2016: Modest Changes Obscure Part D's Impact" *Health Affairs*, Web Exclusive, W242-253 (February 21, 2007).

<sup>4</sup> "National Health Expenditure Projections: 2006-2016," Centers for Medicare & Medicaid Services online, [www.cms.hhs.gov](http://www.cms.hhs.gov). (January 2007).

<sup>5</sup> Health Care Financing Administration (now CMS) online data, published March 2001.

payments made by consumers directly to independent providers.

### **Medicare Home Health**

Medicare is the largest single payer of home health care services. In 2006, Medicare spending accounted for approximately 37 percent of home health expenditures. (See Figure 2. Note: Medicare expenditures for home health include expenditures for hospice and home health care.) Other public funding sources for home health include Medicaid, the Older Americans Act, Title XX Social Services Block Grants, the Veterans' Administration, and Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). While Medicare pays the largest share for home health care, combined federal-state Medicaid outlays for in-home services (including personal care services that Medicare does not pay for) are actually greater. Medicaid home health spending was anticipated to grow 19.8 percent in 2006, and average a 9.8 percent growth rate per year from 2007 to 2016.<sup>6</sup>

As recently as 1997, home health spending was 9 percent of Medicare's benefit payments. Growth in the Medicare home health benefit between 1990 and 1996 can be attributed to specific legislative expansions of the benefit, court decisions, and to myriad socio-demographic trends that fostered growth in the program from the beginning. The percent of spending, however, has declined since 1997. In 2006, the home health benefit accounted for 3.5 percent of total Medicare spending (\$390 billion). Thirty six percent was spent for hospital care, 15 percent for physician services, and two percent for hospice care (See Figure 3).

<sup>6</sup> "National Health Expenditure Projections: 2006-2016," Centers for Medicare & Medicaid Services online, [www.cms.hhs.gov](http://www.cms.hhs.gov). (January 2007).

Between 1998 and 2000, Medicare home health spending fell from \$14 billion to \$9.2 billion (-34 percent) through the BBA. The BBA's interim payment system (IPS) introduced a per-beneficiary limit designed to limit growth in home health expenditures by excluding a two-year inflation adjustment. Finally, agency payments under the IPS were restricted to the lowest of the agency's actual costs, the per-visit cost limits, or per-beneficiary cost limits. The Lewin Group, a health care consulting firm, estimated that 90 percent of agencies had costs that exceeded BBA limits by an average of 32 percent without changing practice patterns.<sup>7</sup>

The Medicare Payment Advisory Commission (MedPAC) calculated a total reduction of 1.3 million beneficiaries between 1997 and 2001. Visits per client and per client reimbursement had also declined since 1996. Two studies conducted by researchers at The George Washington University identified beneficiary access problems resulting from the BBA.<sup>8,9</sup> Additional studies from MedPAC and the Government Accountability Office (GAO) also suggest that access is a growing problem for patients who require intensive services.<sup>10</sup> In

<sup>7</sup> The Lewin Group, "An Impact Analysis for Home Health Agencies of the Medicare Home Health Interim Payment System of the 1997 Balanced Budget Act." Washington, DC: National Association for Home Care (August 11, 1999).

<sup>8</sup> Smith B.M., K.A. Maloy, and D.J. Hawkins, "An Examination of Medicare Home Health Services: A Descriptive Study of the Effects of the Balanced Budget Act Interim Payment System on Access to and Quality of Care," Washington, DC: George Washington University Center for Health Services Research & Policy. (September 1999)

<sup>9</sup> B.M. Smith, K.A. Maloy, and D.J. Hawkins, "An Examination of Medicare Home Health Services: A Descriptive Study of the Effects of The Balanced Budget Act Interim Payment System on Hospital Discharge Planning." Washington, DC: George Washington University Center for Health Services Research & Policy. (January 2000).

<sup>10</sup> Abt Associates, Inc. *Survey of Home Health Agencies*, No. 99-2. Cambridge (MA): Author. Report to the Medicare Payment Advisory Commission under contract. (September 1999), and General Accounting Office. *Medicare Home Health Agencies: Closures Continue, With Little Evidence Beneficiary Access Is Impaired*. No. HEHS-99-120. Washington: Author. (May 1999).

June 2003, MedPAC issued a report, indicating that skilled nursing facility (SNF) care is now substituting for home health care for some patients, most likely at a much higher cost to Medicare.<sup>11</sup>

Table 2 shows changes in utilization and expenditures in the Medicare home health benefit that have occurred since 1996. An estimated 3.6 million Medicare enrollees received fee-for-service home health services in 1997, twice the number of recipients in 1990. Since 1997, utilization of the home health benefit has decreased significantly.

### **Medicare Home Health Prospective Payment**

The BBA mandated that CMS develop a PPS (implemented October 1, 2000) for Medicare home health, which set a national payment rate and enticed providers to deliver more efficient care.<sup>12</sup> The findings of a final evaluation of CMS' episode-based PPS demonstration identified a reduction in overall episode costs, which was accompanied by an increase in per-visit costs when agencies were paid prospectively based on an episode of care. This is due in large part to fewer visits over which to budget fixed costs.<sup>13</sup>

The home health PPS relies on an 80-category case-mix adjuster (153 beginning in 2008) to set payment rates based on patient characteristics including clinical severity, functional status, and the need for rehabilitative therapy services. The case-mix adjusted payment rate is similar to the Medicare SNF

<sup>11</sup> Medicare Payment Advisory Commission, *Report to the Congress: Variation and Innovation in Medicare* (June 2003).

<sup>12</sup> "Medicare Program; Prospective Payment System for Home Health Agencies; Final Rule," *Federal Register*, vol. 65, no. 128, July 3, 2000. Pp. 41128-41214.

<sup>13</sup> Cheh V., "The Final Evaluation Report on the National Home Health Prospective Payment Demonstration: Agencies Reduce Visits While Preserving Quality," Princeton, NJ: Mathematica Policy Research, Inc. (April 30, 2001).

and inpatient hospital prospective payment systems. Like its counterparts, the home health PPS also includes payments that partially reimburse for unexpectedly high outliers, and adjusts payments for geographically through an area wage index. However, a major difference among the systems is the unit of payment. SNFs are paid by the day while the home health PPS pays by the 60-day episode.

### **Medicaid Home Care**

Medicaid payments for home care are divided into three main categories: the mandatory traditional home health benefit, and two optional programs, the personal care option and home and community-based waivers. Together, these three home care service categories represent a relatively small but growing portion of total Medicaid payments.

Figure 4 shows that approximately 31 percent (\$79 billion) of the \$258 billion in Medicaid benefit payments in fiscal year 2004 (FY2004) were for hospital care and institutional services. Home care services comprised 16.3 percent of the payments. Hospice is an optional Medicaid service that is currently offered by 46 states; payments for hospice services in FY2005 were estimated at \$1.3 billion.

Table 3 shows the growth in Medicaid home care outlays since FY1995. Expenditures increased to \$24.3 million in FY2000, decreased to \$16.7 million (a loss of 31.5 percent) in FY2001, and rebounded to \$37.2 million in FY2004. Changes in the reporting of Medicaid expenditures make it difficult to pinpoint the source of the decrease and why there appears to be a dramatic increase, although states have recently begun to place a greater emphasis on providing care at home in lieu of institutions.

### **Managed Care**



Health care services in the United States are increasingly financed through managed care organizations. Managed care organizations, including health maintenance organizations (HMOs), typically finance health care services through a negotiated, prepaid rate to health care providers. A fully capitated contract specifies a lump sum payment per enrollee to cover all care provided through the plan, but there are many variations of capitation. In contrast, traditional health insurance, commonly termed fee-for-service, pays providers based on the number of services delivered generally with fewer limitations on which providers would be paid.

Managed care is most prevalent in the employer-based health insurance market. Ninety-five percent of workers with health insurance received health insurance through a managed care plan in 2002.<sup>14</sup> Managed care enrollment has increased among Medicaid enrollees as states seek federal waivers to convert their Medicaid programs to managed care programs. By 2007, 65 percent of all Medicaid beneficiaries were enrolled in managed care.<sup>15</sup> While Medicare managed care enrollment has only slowly increased, financial incentives created by the Medicare Modernization Act (MMA) has led to an increasing number of beneficiaries enrolling in Medicare Advantage (MA) plans. As of June 2007, 19.7 percent of Medicare beneficiaries were enrolled in MA.<sup>16</sup>

The increasingly competitive health care market has created incentives for home care

agencies to enter managed care provider networks. However, little is known about the extent to which home care agencies have entered into managed care arrangements. A preliminary (and somewhat dated) study conducted for HCFA. The authors found that managed care clients utilized less home health resources, compared to fee-for-service clients, but also had less favorable outcomes on average. This suggests the need for further research on the relationship between managed care and home care patient outcomes.<sup>17</sup>

## HOME CARE RECIPIENTS

The *2000 Home and Hospice Care Survey* findings indicate that 7.2 million individuals received formal home care services in 2000, a decrease of 5.8 percent from 1998.<sup>18</sup> (Table 4) This figure represents roughly 2.5 percent of the US population. Of these recipients, 69 percent were over age 65 and approximately 64 percent were women. Much of this reduction can be attributed to a reduction in patients receiving home health benefits under Medicare.

Table 5 shows that 20.3 percent of 2004 Medicare home health patients had conditions related to diseases of the circulatory system as their principal diagnosis. People with heart disease, including congestive heart failure, made up over half of this group. Injury/poisoning and diseases of the musculoskeletal system and connective tissue were also frequent principal diagnoses for Medicare home health patients.

<sup>13</sup> Gabel J., L. Levitt, J. Pickreign, et al. "Job-Based Health Benefits in 2002: Some Important Trends," *Health Affairs*, vol. 21, no. 5. (September/October 2002).

<sup>14</sup> Centers for Medicare & Medicaid Services, "Medicaid Managed Care Enrollment as of December 31, 2006," <http://www.cms.hhs.gov/MedicaidDataSourcesGenInfo/Downloads/mmcpr06.pdf> (July 2007).

<sup>15</sup> Centers for Medicare & Medicaid Services online, <http://cms.hhs.gov/healthplans/reportfilesdata/> (July 25, 2005).

<sup>16</sup> Shaughnessy P.W., R.E. Schlenker, D.F. Hittle, et al., *A Study of Home Health Care Quality and Cost Under Capitated and Fee-For-Service Payment Systems, Vol. 1: Summary* (Denver: Center for Health Policy Research 1994).

<sup>17</sup> US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *2000 National Home and Hospice Care Survey*, CD-ROM Series 13, No. 31. July 2002.

Many hospital patients are discharged to home care services for continued rehabilitative care. As hospital stays shortened beginning in the early 1980s, the percentage of Medicare patients discharged to home health care increased from 9.1 percent in 1981 to 17.9 percent in 1985. MedPAC estimated that among seven selected diagnosis related groups (DRG), an average of 12.1 percent of Medicare hospital patients used home health care following discharge in FY2001.<sup>19</sup>

Table 6 shows the percentage of Medicare beneficiaries discharged from an acute care hospital to home health care by selected DRGs. Medicare's hospital inpatient PPS pays hospitals a predetermined amount per hospital discharge. The DRG classification system assigns patients to over 500 groups, distinguishing cases with similar clinical problems that are expected to require similar amounts of hospital resources. The DRG-based payment for each discharge includes separately determined amounts for operating and capital costs.<sup>20</sup>

A study performed by the Department of Health and Human Services, Office of Inspector General found that 38 percent of Medicare beneficiaries who began use of home health care in the year 2000 came directly from the community. These patients had no prior hospitalizations (48 percent) or nursing home stays (14 percent) within 15 days of receiving home health care.<sup>21</sup> Table 7 shows the top five diagnoses for Medicare community home health beneficiaries. Diagnosis is indicated by International Classification of Diseases coding system (ICD-9).

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<sup>18</sup> Medicare Payment Advisory Commission, *Report to the Congress: Variation and Innovation in Medicare* (June 2003).

<sup>19</sup> Medicare Payment Advisory Commission, *Report to the Congress: New Approaches in Medicare* (June 2004).

<sup>20</sup> Department of Health and Human Services, Office of Inspector General, *Home Health Community Beneficiaries 2001*, October 2001, #OEI-02-01-00070.

## CAREGIVERS

The *2004 Caregiving in the U.S.* survey, sponsored by the National Alliance for Caregiving and AARP, documented the prevalence of caregiving in the US. The study found that more than one in five US households (an estimated 44.4 million caregivers over age 18) are informal caregivers for a person older than age 18. This report also showed that 62 percent of caregivers are married and/or living with a partner, and nearly two-thirds (61 percent) are women. The typical caregiver is a 46 year old woman with at least some college experience who provides more than 20 hours of care each week to her mother.<sup>22</sup>

### **Formal Caregivers**

Formal caregivers include professionals and paraprofessionals who are compensated to provide in-home health care and personal care services. BLS and CMS provide data on these employees; however, agency definitions and methods of counting formal caregivers differ. BLS provides an occupational classification for "home health care services," which excludes hospital-based and public agency workers. Its method of counting is "number of employees." CMS limits its statistics to employees of certified home health agencies. Furthermore, its survey presents data on aggregated full-time equivalents (FTEs).

As shown in Table 8, BLS estimated that 773,200 persons were employed in home health care agencies in 2004, with the exclusions described above. For both BLS and CMS, the largest numbers of employees/FTEs are home care aides and RNs. CMS recorded 261,440 FTEs employed in Medicare-certified

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<sup>21</sup> National Alliance for Caregiving and AARP. "2004 Caregiving in the U.S.," April 2004 ([www.aarp.org](http://www.aarp.org)).

agencies as of December 2006, an increase of 4,033 FTEs since December 2005.

Figure 5 shows calendar year home care services employment for 1996 to 2006 based on BLS monthly statistics for December (the 2000 employment data are based on mid-year estimates). From 1993 to 2006, home care employment grew an average 5.4 percent annually (510,000 to 867,100). Between 1997 and 2000, total home care employment declined by more than 10 percent. By the end of 2006, it had regained nearly 40 percent from the low point in 2000.

### **Productivity**

Since 1996, NAHC has worked with the Hospital and Healthcare Compensation Service (HCS) to conduct an annual survey of compensation in the home care and hospice industry. Employee productivity data are now collected in this survey. Productivity in home care is typically based on the average number of visits provided per day. Table 9 shows data from the *Homecare Salary & Benefits Report 2006-2007*.

### **Compensation**

Summary home care and hospice compensation results for the above-mentioned 2006 to 2007 HCS survey are shown in Tables 10 and 11. To reduce the likelihood that outliers skew results, compensation is reported for the median salary, rather than mean salary. The survey includes data from agencies with revenues up to \$15 million. HCS publishes a separate report for agencies and chain organizations with revenues in excess of \$15 million (The Multi-Facility Corporate Compensation Report; for more information, visit [www.hhcsinc.com](http://www.hhcsinc.com)).

## **COST EFFECTIVENESS**

Home care is a cost-effective service for individuals recuperating from a hospital stay and for those who, because of a functional or cognitive disability, are unable to take care of themselves. Table 12 compares the average Medicare charges on a per day basis for hospital and SNF to the average Medicare charge for a home health visit.

The following section lists some examples of the cost-effectiveness of home care. However, it should be noted that cost-effectiveness is not the only rationale for home care. Home care reinforces and supplements care provided by family members and friends and maintains the recipient's dignity and independence, qualities that can be lost even in the best institutions. Home care also allows patients to take an active role in their care.<sup>23</sup>

### **Home Health Care vs. SNF and Inpatient Rehabilitation Facility Care**

One study by the RAND Corporation for MedPAC found that home health benefit ranks highest regarding outcomes and cost-effectiveness for patients who have undergone hip or knee replacement. The study compares care delivered in the home health setting with SNFs and inpatient rehabilitation facility (IRF) care. RAND determined that 35 percent of the knee and hip replacement patients studied were discharged from an acute care hospital to home for either home health rehabilitation, outpatient therapy, or no formal continuing care. The remainder of the patients was split evenly in discharge to IRF or SNF care. To measure health outcomes, RAND examined mortality rates and whether patients were institutionalized 120 days after being discharged from acute care. The study found that patients who received SNF or IRF care

<sup>22</sup> Sheldon P. and M. Bender. "High-Technology in Home Care." *Community Health Nursing and Home Health Nursing*, no. 3 (1994): 507-519.

were more likely to be institutionalized than patients discharged to home. RAND considered post-acute care payments and total episode payments, including the cost of the initial hospitalization for joint replacement provided to patients discharged to home. The costs studied did not include Medicare Part B payments to physicians.

Several studies have compared inpatient care to home care costs for a specific group of patients. An analysis of studies that investigated the use of home care as a cost-effective substitute for acute care services found a statistically significant relationship between home health use and reduced use of inpatient hospital care.<sup>24</sup> The cost savings data for six studies of home care cost-effectiveness are summarized in Table 13. The information has been aggregated at a monthly level for purposes of comparison.

### **Psychiatric Care**

An in-home crisis intervention program developed for psychiatric patients in Connecticut was effective in reducing hospital admissions, lengths of stay, and readmissions. A two-year analysis of more than 600 patients showed that 80.7 percent of patients referred for hospital care could be treated at home instead. When inpatient admissions were necessary, the average length of stay was reduced from 11.97 days to 7.48 days by adding elements of the in-home care program. Patients who received home care services were also less likely to be readmitted for hospital care (11.8 percent of home care patients were readmitted compared to 45.9 percent of patients who did not receive home care services).<sup>25</sup>

<sup>23</sup> Hughes S.L., A. Ulasevich, F.M. Weaver, et al. "Impact of Home Care on Hospital Days: A Meta Analysis," *Health Services Research* no. 4 (1997): 415-532.

<sup>24</sup> Pigott H.E. and L. Trott. "Translating Research into Practice: The Implementation of an In-home Crisis Intervention Triage

### **Patients with COPD**

An innovative home care program for patients with chronic obstructive pulmonary disease (COPD) that was tested in Connecticut found significant cost savings by providing more comprehensive home care services to COPD patients who previously required frequent hospitalizations. Monthly costs for hospitalizations, emergency room visits and home care fell from \$2,836 per patient before the intervention to \$2,508 per patient--a net savings of \$328 per patient per month.<sup>26</sup>

### **Terminally Ill Veterans**

A home care program for terminally ill veterans reduced hospital per capita costs by \$971. In the six-month study, patients receiving home care used 5.9 fewer hospital days than those in the control group. No differences were found in patient survival, activities of daily living, cognitive functioning, or morale. However, patient and caregiver satisfaction with care was significantly better among the patients receiving home care.<sup>27</sup>

### **Patients with Congestive Heart Failure**

The impact of intensive home care monitoring on the morbidity rates of elderly patients with congestive heart failure was the focus of another study. The study found that with intensive home care surveillance, the total hospitalization rate dropped from 3.2 admissions per year to 1.2 admissions per year

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and Treatment Service in the Private Sector," *American Journal of Health Quality* no. 3 (1993): 138-144.

<sup>26</sup> Haggerty M.C., R. Stockdale-Woolley, and S. Nair. "Respi-Care: An Innovative Home Care Program for the Patient with Chronic Obstructive Pulmonary Disease," *Chest* no. 3 (1991): 607-612.

<sup>25</sup> Hughes S.L., J. Cummings, F. Weaver, L. Manheim, B. Braun, and K. Conrad. "A Randomized Trial of the Cost Effectiveness of VA Hospital-based Home Care for the Terminally Ill," *Health Services Research* no. 6 (1992): 801-817.

and the length of stay decreased from 26 days per year to six days per year. Cardiovascular admissions declined from 2.9 admissions per year to 0.8 admissions per year and length of stay decreased from 23 days per year to four days per year. An in-home program also resulted in significant functional status improvement in elderly patients with congestive heart failure.<sup>28</sup>

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<sup>27</sup> Kornowski R., D. Zeeli, M. Averbuch, and A. Finkelstein, et al. (Tel Aviv, Israel). "Intensive Homecare Surveillance Prevents Hospitalization and Improved Morbidity Rates Among Elderly Patients with Severe Congestive Heart Failure," *American Heart Journal* no. 4 (1995): 762-766.

## APPENDIX A: Tables and Figures

**Table 1: Number of Medicare-certified Home Care Agencies, by Auspice, for Selected Years, 1967-2006**

Year	FREESTANDING AGENCIES						FACILITY-BASED AGENCIES			
	VNA	COMB	PUB	PROP	PNP	OTH	HOSP	REHAB	SNF	TOTAL
1967	549	93	939	0	0	39	133	0	0	1,753
1980	515	63	1,260	186	484	40	359	8	9	2,924
1990	474	47	985	1,884	710	0	1,486	8	101	5,695
1996	576	34	1,177	4,658	695	58	2,634	4	191	10,027
1997	553	33	1,149	5,024	715	65	2,698	3	204	10,444
1998	460	35	968	3,414	610	69	2,356	2	166	8,080
1999	452	35	918	3,192	621	65	2,300	1	163	7,747
2000	436	31	909	2,863	560	56	2,151	1	150	7,152
2001	425	23	867	2,835	543	68	1,976	1	123	6,861
2002	430	27	850	3,027	563	79	1,907	1	119	7,007
2003	439	27	888	3,402	546	74	1,776	0	113	7,265
2004	446	36	932	3,832	558	69	1,695	1	110	7,679
2005	461	36	1,043	4,321	566	74	1,618	2	103	8,224
2006	459	29	1,132	4,919	562	85	1,547	2	103	8,838

**Source:** Centers for Medicare & Medicaid Services (CMS), Center for Information Systems, Health Standards and Quality Bureau, (2006 data obtained in February 2007).

VNA: Visiting Nurse Associations are freestanding, voluntary, nonprofit organizations governed by a board of directors and usually financed by tax-deductible contributions as well as by earnings.

COMB: Combination agencies are combined government and voluntary agencies. These agencies are sometimes included with counts for VNAs.

PUB: Public agencies are government agencies operated by a state, county, city, or other unit of local government having a major responsibility for preventing disease and for community health education.

PROP: Proprietary agencies are freestanding, for-profit home care agencies.

PNP: Private not-for-profit agencies are freestanding and privately developed, governed, and owned nonprofit home care agencies. These agencies were not counted separately prior to 1980.

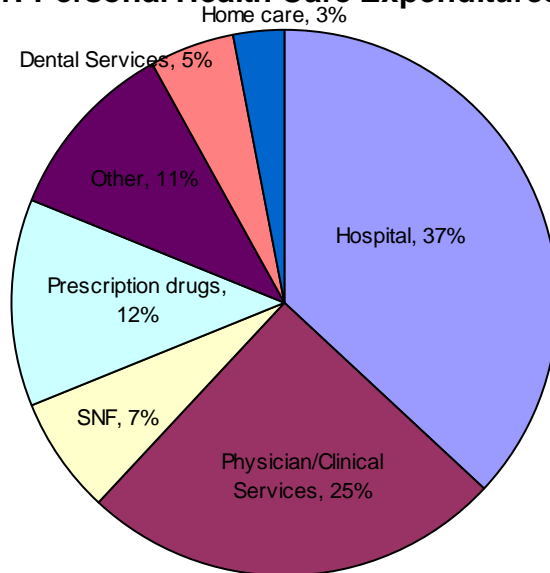
OTH: Other freestanding agencies that do not fit one of the categories for freestanding agencies listed above.

HOSP: Hospital-based agencies are operating units or departments of a hospital. Agencies that have working arrangements with a hospital, or perhaps are even owned by a hospital but operated as separate entities, are classified as freestanding agencies under one of the categories listed above.

REHAB: refers to agencies based in rehabilitation facilities.

SNF: Refers to agencies based in skilled nursing facilities.

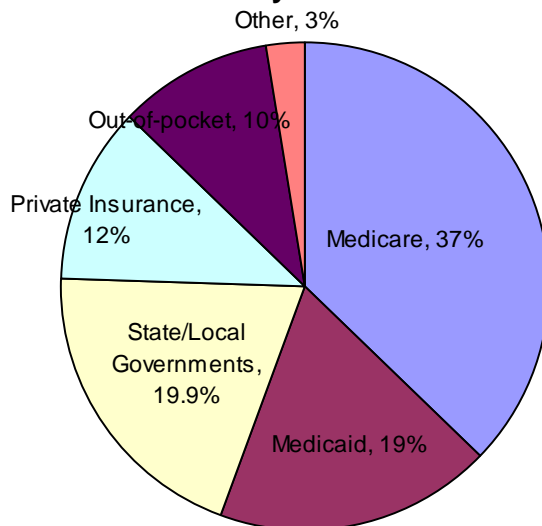
**Figure 1: Personal Health Care Expenditures, 2006<sup>1, 2</sup>**



Source: Heffler, S., et al. "Health Spending Projections Through 2016: Modest Changes Obscure Part D's Impact." Health Affairs (Web Exclusive): February 21, 2007.

<sup>1</sup>Projected, <sup>2</sup>Freestanding facilities only. Additional services of this type are provided in hospital-based facilities and counted as hospital care.

**Figure 2: Sources of Payment for Home Health, 2006<sup>1</sup>**

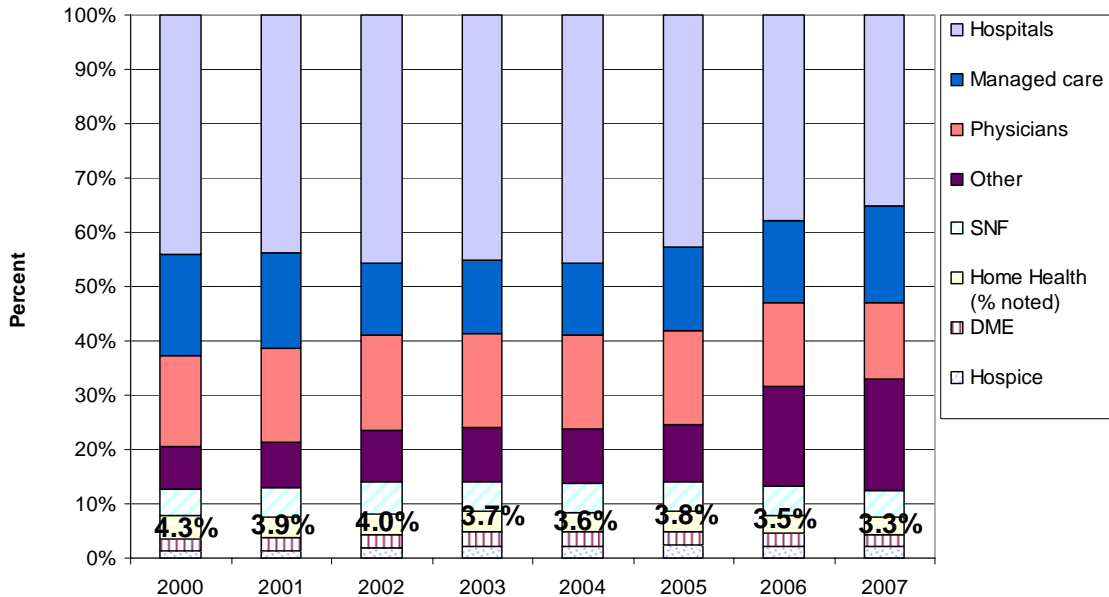


Source: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Care Expenditures Historical and Projections: 1965-2016, [www.cms.gov](http://www.cms.gov), (March 2007).

Notes: <sup>1</sup>Data for 2006 is projected.

Percentages may not total to 100.0 due to rounding.

**Figure 3: Percent Medicare Payments, by Benefit, Fiscal Years 2000-2007**



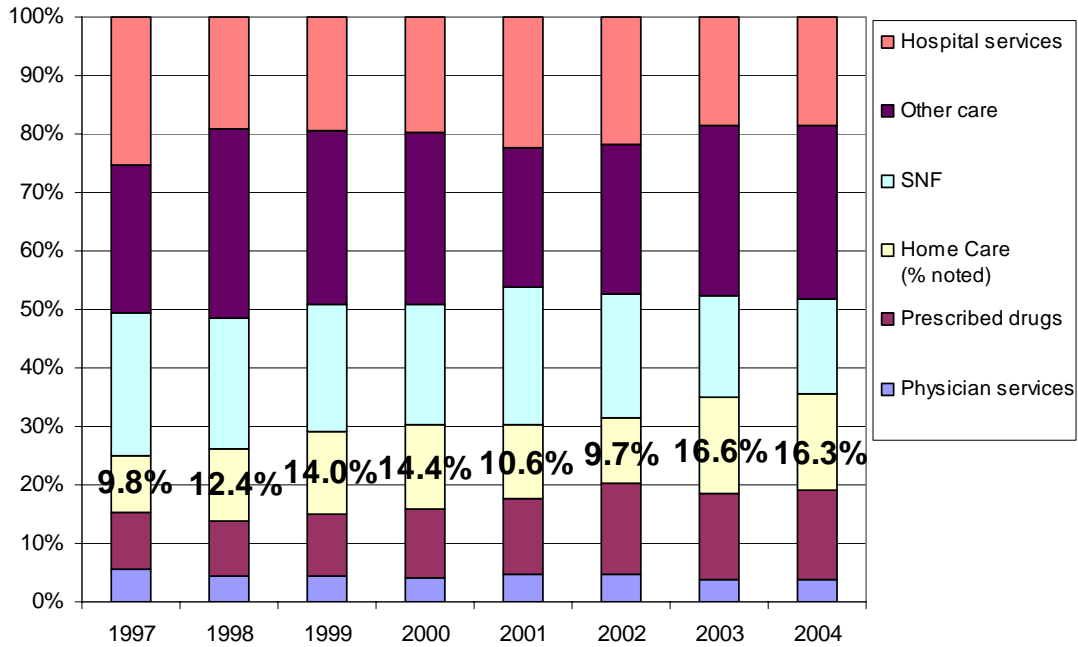
Source: Centers for Medicare & Medicaid Services, Office of the Actuary, Medicare & Medicaid Cost Estimates Group. February 2007.  
 Notes: <sup>1</sup>Fiscal Year 2007 numbers are estimated. <sup>2</sup>This increase is due primarily to the addition of Part D to Medicare program spending.

**Table 2: Medicare Fee-for-Service Home Health Outlays, Visits, Clients, Payment/Client, and Visits/Client, 1996-2005**

Year	Outlays (\$million)	Visits (1000s)	Clients (1000s)	Payment/Client	Visits/Client
1996	16,789	264,553	3,598	4,666	74
1997	16,723	257,751	3,554	4,705	73
1998	10,446	154,992	3,062	3,412	51
1999	7,908	112,748	2,735	2,892	41
2000	7,352	90,730	2,497	2,945	36
2001	8,637	73,698	2,439	3,541	30
2002	9,635	78,055	2,724	3,538	29
2003	10,149	82,517	2,888	3,524	29
2004	11,500	88,872	2,840	4,050	31
2005	12,885	95,534	3,228	3,991	30

Sources: Centers for Medicare & Medicaid Services. HCIS home health data, 1994-1998 (December 2000). HCIS home health data, 1999 & 2000 (September 2001). HCIS home health data, 2001 (December 2002). HCIS home health data, 2002 (October 2003). HCIS home health data, 2003 (October 2004). HCIS home health data, 2004 (October 2005). HCIS home health data, 2005 (October 2006).

**Figure 4: Medicaid Expenditures by Service, 1997-2004**



Source: Centers for Medicare & Medicaid Services, MSIS (formerly HCFA-2082) (www.cms.gov): June 2007.

Notes: <sup>1</sup>"MR" indicates facilities for persons with mental retardation.

<sup>2</sup>For years 1998-2004, includes home health, personal support services, and home and community based waiver program. The 1997 figure represents home health only. All numbers represent combined federal and state spending.

**Table 3: Medicaid Home Care Expenditures and Recipients, 1995-2004**

Fiscal Year	Vendor Payments	
	(\$millions)	Recipients (1000s)
1995	9,406	1,639
1996	10,583	1,633
1997	12,237	1,861
1998	17,600	4,800
1999	21,500	4,882
2000 <sup>1</sup>	24,300	5,544
2001	16,655	6,776
2002	19,288	7,775
2003	38,715	8,125
2004	37,241	8,377

Source: Centers for Medicare & Medicaid Services, MSIS (formerly HCFA-2082). (www.cms.gov). (2001 & 2002 data obtained February 2005), (2003 & 2004 data obtained July 2007)

Note: <sup>1</sup>Hawaii did not report for FY 2000. Their FY 1999 data are used in this table.

Figures include expenditures for home health and personal support services. Figures for 1999 through 2004 also include home and community-based waiver program.

**Table 4: Number and Percent of Home Health Discharges by Age, Gender, Race, and Marital Status, 2000**

**(Total Discharges =7,178,964)**

Characteristic	Number	Percent of Total	Characteristic	Number	Percent of Total
<b>Age in years</b>			<b>Marital Status</b>		
< 6 years	224,692	3.1	Under age 65:		
6-17	75,144	1.0	Married	1,006,349	14.0
18-44	741,386	10.3	Widowed	98,859	1.4
45-64	1,175,637	16.4	Divorced or separated	179,819	2.5
65+	4,962,108	69.1	Single or never married	430,347	6.0
85+	1,219,997	17.0	Unknown	201,647	2.8
<b>Gender</b>			<b>Age 65+:</b>		
Under age 65:			Married	1,887,719	26.3
Male	910,206	12.7	Widowed	2,021,922	28.2
Female	1,306,652	18.2	Divorced or separated	196,876	2.7
Age 65+			Single or never married	377,283	5.3
Male	1,687,132	23.5	Unknown	478,303	6.7
Female	3,274,976	45.6			
<b>Race/Ethnicity</b>			<b>MSA or Non-MSA</b>		
Under age 65:			Under age 65:		
Hispanic	140,873	2.0	MSA	1,873,398	26.1
Black	250,864	3.5	Non-MSA	343,456	4.8
White and other	2,052,306	28.6	Age 65+:		
Age 65+			MSA	4,207,557	58.6
Hispanic	152,191	2.1	Non-MSA	754,548	10.5
Black	465,559	6.5			
White and other	4,428,111	61.7			

**Source:** US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, 2000 *National Home and Hospice Care Survey*, CD-ROM Series 13, No. 31 (July 2002).

**Note:** Percentages may not add to totals due to rounding.



**Table 5: Medicare Home Health Utilization by Principal Diagnosis, 2004**

<b>Principal ICD-9-CM Diagnosis<sup>1</sup></b>	<b>Principal ICD-9-CM Codes</b>	<b>Patients (1,000's)</b>	<b>Percent</b>
Infectious and Parasitic Diseases	001-139	17	0.6
Neoplasms	140-239	94	3.3
Malignant Neoplasm of Trachea, Bronchus, and Lung	162	18	0.6
Endocrine, Nutritional, and Metabolic Diseases and Immunity Disorders	240-279	260	9.2
Diabetes Mellitus	250	230	8.1
Diseases of the Blood and Blood Forming Organs	280-289	52	1.8
Mental Disorders	290-319	46	1.6
Diseases of the Nervous System and Sense Organs	320-389	76	2.7
Diseases of the Circulatory System	390-459	582	20.5
Essential Hypertension	401	103	3.6
Heart Disease	402, 410-411, 413-414, 427-428	309	10.9
Diseases of the Respiratory System	460-519	207	7.3
Pneumonia, Organism Unspecified	486	57	2.0
Diseases of the Digestive System	520-579	65	2.3
Diseases of the Genitourinary System	580-629	65	2.3
Diseases of the Skin and Subcutaneous Tissue	680-709	183	6.5
Diseases of the Musculoskeletal System and Connective Tissue	710-739	196	6.9
Osteoarthritis and Allied Disorders	715	45	1.6
Symptoms, Signs, and Ill-Defined Conditions	780-799	219	7.7
Injury and Poisoning	800-999	176	6.2
Supplementary Classification	V01-V82	1,283	45.2
<b>Total, All Diagnoses<sup>2</sup></b>	<b>---</b>	<b>2,836</b>	<b>100.0</b>
<b>Total Leading Diagnoses<sup>3</sup></b>	<b>---</b>	<b>1,411</b>	<b>49.7</b>

<sup>1</sup>ICD-9-CM is International Classification of Diseases, 9<sup>th</sup> Revision, Clinical Modification (Volume 1). Only the first-listed or principal diagnosis has been used.

<sup>2</sup>Includes invalid codes not listed separately.

<sup>3</sup>Specific leading diagnostic categories were selected for presentation because of frequency of occurrences or because of special interest.

**Source:** Centers for Medicare & Medicaid Services, Office of Information Services: Data from the Medicare Data Extract System; data development by the Office of Research, Development, and Information. *Health Care Financing Review: Medicare and Medicaid Statistical Supplement*. 2006.

**Table 6: Proportion of Medicare Beneficiaries Discharged to Home Health Care for the 10 Most Common Diagnosis Related Groups (DRGs), 2000-2004**

<b>Initial Hospital DRG</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>% Change 2000-2004</b>
DRG 462- Rehabilitation	7.4%	7.9%	8.1%	8.6%	8.7%	17.6
DRG 209- Major Joint and Limb Reattachment Procedures of Lower Extremity	7.0	7.3	7.6	7.9	8.2	17.1
DRG 127- Heart Failure and Shock	6.1	6.0	5.7	5.6	5.6	-8.2
DRG 089- Simple Pneumonia and Pleurisy	4.3	3.7	4.1	3.8	4.2	-2.3
DRG 088- Chronic Obstructive Pulmonary Disease	3.4	3.1	3.1	2.9	3.1	-8.8
DRG 148- Major Small and Large Bowel Procedures	2.1	2.0	2.0	2.0	1.9	-9.5
DRG 014- Intracranial Hemorrhage or Cerebral Infarction	3.1	3.1	3.0	2.4	1.9	-38.7
DRG 296- Nutrition/Miscellaneous Metabolic Disorders	1.7	1.7	1.9	1.9	1.7	0
DRG 107- Coronary Bypass With Cardiac Catheterization	2.0	2.0	1.8	1.8	1.5	-25.0
DRG 121- Circulatory Disorders with Acute Myocardial Infarction and Major Complication	1.6	1.6	1.5	1.4	1.4	-12.5

**Source:** Department of Health and Human Services, Office of Inspector General. *Medicare Beneficiary Access to Home Health Agencies: 2004*. #OEI-02-04-00260. July 2006. OIG analysis of CMS’s National Claims History File, 2005

Note that the year starts with April 1 of the prior year and ends with March 31 of that year.

**Table 7: Ranking of Highest Volume Diagnoses for “Community Beneficiaries” by Year, 1997-2000**

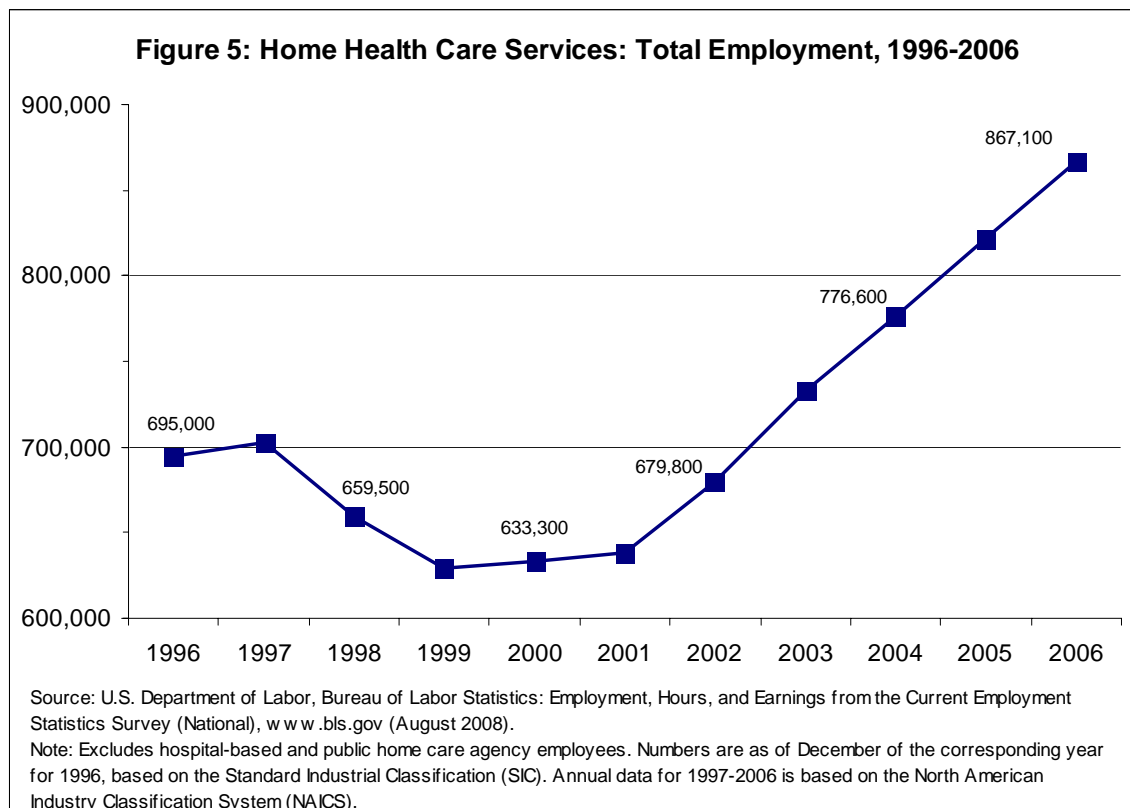
<b>Primary ICD9 Diagnosis</b>	<b>Percent (rank)</b>			
	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
250- Diabetes	8.6 (1)	7.6 (1)	6.9 (1)	6.2 (1)
401- Essential hypertension	7.7 (2)	6.2 (2)	5.5 (3)	5.3 (3)
428- Heart failure	5.3 (3)	5.0 (3)	4.7 (4)	4.6 (4)
707- Chronic ulcer of the skin	3.6 (4)	4.6 (4)	5.7 (2)	5.6 (2)
715- Osteoarthritis	3.2 (5)	3.3 (5)	3.2 (5)	3.6 (5)

**Source:** Department of Health and Human Services, Office of Inspector General. *Medicare Home Health Care Community Beneficiaries 2001*, #OEI-02-01-00070. October 2001.



<b>Table 8: Number of Home Health Care Workers, (2004) and Medicare-certified Agency FTEs (2006)</b>		
<b>Type of Employee</b>	<b>Total Number of Home Health Employees<sup>1</sup></b>	<b>Number of Medicare Home Health FTEs<sup>2</sup></b>
RNs	117,419	95,027
LPNs	52,294	42,113
Physical Therapy Staff	17,248	19,920
Home Care Aides	428,297	56,401
Occupational Therapists	5,576	5,225
Social Workers	8,884	4,829
Other	143,482	37,925
<b>Totals</b>	<b>773,200</b>	<b>261,440</b>

**Sources:** <sup>1</sup> U.S. Department of Labor, Bureau of Labor Statistics, National Industry Occupational Employment Matrix, data for 2002. Excludes hospital-based and public agencies. (March 2007)  
<sup>2</sup> Unpublished data on FTEs in Medicare-certified home health agencies for calendar year (CY) 2006 from the Centers for Medicare & Medicaid Services HCFA Center for Information Systems, Health Standards and Quality Bureau. (February 2007).



<b>Table 9: Home Health Care Visit Staff Productivity (Actual Visits Performed)</b>	
<b>Staff Type</b>	<b>Productivity (per 8 Hours)</b>
RN	5.13
LPN/LVN	5.98
Home Care Aide	5.37
Physical Therapist	5.48
Occupational Therapist	5.27
Social Worker	3.44
<b>Source:</b> National Association for Home Care & Hospice, Hospital & Healthcare Compensation Service. <i>Homecare Salary &amp; Benefits Report 2006-2007</i> . October 2006.	

<b>Table 10: Average Compensation of Home Health Agency Executives, October 2006</b>	
	<b>Salary Range by Percentile Median (25<sup>th</sup>, 75<sup>th</sup>)</b>
Executive Director/CEO	\$90,000 (75,001, 119,896)
Chief Operating Officer/ Program Director	72,100 (68,093, 92,350)
Top Level Financial Executive	84,700 (68,213, 110,887)
Director of Clinical Services	66,542 (60,000, 77,045)
Director of Social Work and Counseling	54,766 (48,110, 57,725)
Quality Improvement/ Utilization Review Manager	63,123 (54,900, 72,000)
<b>Source:</b> National Association for Home Care & Hospice, Hospital & Healthcare Compensation Service. <i>Homecare Salary &amp; Benefits Report 2006-2007</i> . October 2006.	



	Per-Hour Rates by Percentile			Per-Visit Rates by Percentile		
	25 <sup>th</sup>	Median	75 <sup>th</sup>	25 <sup>th</sup>	Median	75 <sup>th</sup>
Registered Nurse	\$23.00	\$25.00	\$28.51	\$30.00	\$33.33	\$37.52
LPN/LVN	16.50	18.50	21.65	19.00	21.75	25.00
Occupational Therapist	26.27	29.87	32.33	47.61	52.13	55.97
Physical Therapist	30.64	32.54	34.96	50.00	55.00	56.75
Respiratory Therapist	19.99	21.19	22.91	37.00	40.00	51.25
Speech/Language Pathologist	25.94	29.00	31.76	47.50	54.95	58.00
Medical Social Worker	20.00	22.14	25.00	40.00	45.00	51.50
Home Care Aide III	10.00	11.00	12.13	12.00	13.25	14.79

**Source:** National Association for Home Care & Hospice, Hospital & Healthcare Compensation Service. Homecare Salary & Benefits Report 2006-2007. October 2006.

	2004	2005 <sup>1</sup>	2006 <sup>1</sup>
Hospital (per day)	\$4,559	\$4,773	\$5,036
SNF (per day)	493	521	535
Home health (per visit)	121	123	125

**Sources:** The hospital and SNF Medicare charge data for 2004 are from the *Annual Statistical Supplement, 2005, to the Social Security Bulletin*, Social Security Administration online ([www.ssa.gov](http://www.ssa.gov)). Home health information 2004 data are from the Health Care Financing Review, Statistical Supplement, Centers for Medicare & Medicaid Services, 2005.

**Note:** <sup>1</sup>Hospital data for 2005 and 2006 were updated using the Bureau of Labor Statistics' (BLS) Producer Price Index (PPI) for General medical and surgical hospitals. Skilled nursing facility data for 2005 and 2006 were updated using BLS' PPI for Nursing care facilities. Home health data for 2005 and 2006 were updated using the BLS' PPI for Home health care services. ([www.bls.gov](http://www.bls.gov)).

**Table 13: Cost of Inpatient Care (Per Patient per Month) Compared to Home Care, Selected Conditions**

Conditions	Hospital Costs	Home Care Costs	Dollar Savings
Low birth weight <sup>1</sup>	\$26,190	\$330	\$25,860
Ventilator-dependent adults <sup>2</sup>	21,570	7,050	14,520
Oxygen-dependent children <sup>3</sup>	12,090	5,250	6,840
Chemotherapy for children with cancer <sup>4</sup>	68,870	55,950	13,920
Congestive heart failure in the elderly <sup>5</sup>	1,758	1,605	153
Intravenous antibiotic therapy for cellulitis, Osteomyelitis, others <sup>6</sup>	12,510	4,650	7,860

**Sources:** <sup>1</sup>Casiro, O.G., McKenzie, M.E., McFayden, L., Shapiro, C., Seshia M.M.K., MacDonald, N., Moffat, M., and Cheang, M.S. "Earlier Discharge with Community-based Intervention for Low Birth Weight Infants: A Randomized Trial." *Pediatrics* 92, no. 1 (1993): 128-134.

<sup>2</sup>Bach, J.R., Intinola, P., Alba, A.S., and Holland, I.E. "The Ventilator-assisted Individual: Cost Analysis of Institutionalization vs. Rehabilitation and In-home Management." *Chest* 101, no. 1 (1992): 26-30.

<sup>3</sup>Field, A.I., Rosenblatt, A., Pollack, M.M., and Kaufman, J. "Home Care Cost-Effectiveness for Respiratory Technology-dependent Children." *American Journal of Diseases of Children* 145 (1991): 729-733.

<sup>4</sup>Close, P., Burkey, E., Kazak, A., Danz, P., and Lange, B. "A Prospective Controlled Evaluation of Home Chemotherapy for Children with Cancer." *Pediatrics* 95, no. 6 (1995): 896-900. (**Note:** The study found that the daily charges for chemotherapy were \$2,329±\$627 in the hospital and \$1,865±\$833 at home. These charges were multiplied by 30 days reflecting the above per-patient per-month costs.)

<sup>5</sup>Rich, M.W., Beckham, V., Wittenberg, C., Leven, C., Freedland, K., and Carney, R.M. "A Multidisciplinary Intervention to Prevent the Readmission of Elderly Patients with Congestive Heart Failure." *The New England Journal of Medicine* 333, no. 18 (1995): 1190-1195.

<sup>6</sup>William, D.N., et al. "Safety, Efficacy, and Cost Savings in an Outpatient Intravenous Antibiotic Program." *Clinical Therapy* 15 (1993): 169-179, cited in Williams, D., "Reducing Costs and Hospital Stay for Pneumonia with Home Intravenous Cefotaxime Treatment: Results with a Computerized Ambulatory Drug Delivery System." *The American Journal of Medicine* 97, no. 2A (1994): 50-55. (**Note:** The estimated hospital cost/day/patient is \$417 and the estimated savings/day/patient is \$262. These costs were multiplied by 30 days, reflecting the above per-patient per-month costs.)