Spillovers of Veterans Hospice Care: The Economic and Social Impact of Palliative Care

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In exchange for military service in the United States, soldiers are promised a benefits package inclusive of health and education benefits after the completion of their service. While the economic effects of the defense-growth relationship have been studied extensively, this paper takes a unique approach to understanding the relationship between veterans and society by investigating the social and economic spillovers of veterans’ hospice care. The study shows that as an early adopter of hospice care, the U.S. Department of Veterans Affairs maximized its efficiency through sponsoring innovative research on geriatric care, introducing competition into the health sector, and legitimizing death and dying among aging populations.

Introduction

In exchange for military service in the United States, soldiers are promised a benefits package that provides health and education benefits after the completion of their service. To administer these services, the United States relies upon the U.S. Department of Veterans Affairs. Employing more than 280,000 persons, which is roughly 14.6% of the federal government’s civilian workforce (Bureau of Labor Statistics 2011), and spending $103.2 billion in 2010, roughly 3.1% of federal outlays (Office of Management and Budget 2012) in pursuit of its
mission, there is a growing concern for the costs associated with the benefits given to the aging veterans’ population (Frahm, Barnett, and Brown 2011). Approximately 40% of the veteran population is 65 or older. The number of veterans in the United States had been trending downward, as shown in Figure 1, but the size of the veteran population has begun to rise following the War on Terror and the wars in Afghanistan and Iraq. Although the political science and economics literatures have discussed the impact of defense-sector spending on a country’s social and economic performance (Heo and Eger 2005; Koumparoulis and Wong 2012; McDonald and Eger 2010; Ward et al. 1995), little is known about the relationship between soldiers and society after the completion of military service.

This study takes a unique approach to understanding the relationship between veterans and society by investigating the social and economic spillovers of veterans’ hospice care. Hospice is a type of medical care and a philosophy that focuses on the palliation of a terminally ill patient’s symptoms at the end of life (Lewis 2007). According to a report from the National Hospice and Palliative Care Organization [NHPCO] (2012), the number of patients in hospice care has grown from 25,000 in 1982 to 1.56 million in 2009. While the tradition of hospice extends back at least to the 11th century, the inclusion of the service in Medicare had to wait for 17 years after Medicare’s creation for the expansion that included hospice services (Connor 1998). It was not until 1992 that the U.S. Department of Veterans Affairs (VA) formalized the provision of hospice and palliative care services in each of its medical centers. Caring for 5,779 veterans in 2009 at a cost of $5.91 million(Frahm, Barnett, and Brown 2011), the growing demand for hospice care has lead the VA to estimate their 2014 hospice expenditures at $102 million (U.S. Department of Veterans Affairs 2012).
The hospice approach of this study provides a unique insight into the social and economic impact of veteran services on the United States. VA benefits provide lifelong care and service for all veterans after the completion of service. Whereas demands upon the various benefits may fluctuate, the end of life is inevitable. More than 30 million Americans served in the military during World War II, the Korean War, and the Vietnam War (Hollingsworth and Bondy 1990). Of the 22 million veterans currently in the United States (National Center for Veterans Analysis and Statistics 2012), the inevitability of end of life results in more than 680,000 deaths annually (National Hospice and Palliative Care Organization 2011). Veteran deaths are expected to increase. The number of deaths of veterans from the Korean War is expected to peak at 150,000 per year in 2015, and the number of deaths of Vietnam veterans will increase from 150,000 to 250,000 in 2030 (U.S. Department of Veterans Affairs 2007). The increasing trend of veteran deaths attributable to age over the next 20 years will test the VA’s ability to provide end-of-life care (Casarett 2010). To accommodate demand for medical and palliative services, the VA has had to reconsider how it provides care.

Foundation of the Veterans’ Effect

Research into the effect of the VA on the economy of the United States has largely been masked by its label as a subset of the literature on the defense-growth relationship. The defense-growth literature began with the seminal work of Benoit (1973, 1978) and others (Mintz and Huang 1990; Russett 1969; Ward and Davis 1992). This work generally concluded that the defense expenditures of a country can influence its overall economic growth (Ali 2011; de Groot 2011; Heo and Eger 2005; Mintz and Huang 1991). As a theoretical foundation, this literature has often relied upon post-service spillovers for a defense effect (McDonald and Eger 2010). While this approach does provide a unique insight into defense economics, post-service
spillovers are managed by the VA and can be better understood as a veterans’ effect, defined as the measured impact of the VA on the economy, rather than a defense effect.

Central to a veterans’ effect is the desire of the VA to maximize the post-service utility of the veteran population. Low wages during service, unequal pay compared with civilian counterparts after service, and risk of injury or loss of life in military operations serve to disincentivize enlistment (Borjas and Welch 1986). To encourage military service, potential enlistees are promised a benefits package that subsidizes the losses they will face as a result of military service. These incentives include enlistment signing bonuses and post-service veteran health coverage and educational assistance. A veterans’ effect, which is derived from these post-service benefits, exists as the VA conducts free transfers of capital on behalf of the veteran population and provides an environment conducive to the maximization of the household’s utility.

Budgetarily and militarily, the veterans’ effect is understood as an individual effect, affecting the veteran’s utility only. Economically, however, the veterans’ effect has spillovers that impact society at-large. Two key areas of societal impact are the education and health benefits provided to veterans, which can be understood as investments into the human capital of veterans, and new and improved medical care procedures. In the area of education, the VA provides assistance under the Servicemen’s Readjustment Act of 1944 (commonly known as the GI Bill). Not only does the GI Bill subsidize the cost of formal education and allow veterans the opportunity to improve their own stock of human capital, it also spills over into the economy. A spillover occurs because this investment in education not only expands the knowledge acquired by an individual but also increases the knowledge available to the economy (Weisbrod 1962). According to Lucas (1988), investments in education lead to advances in technology and
systems, which improve the productivity of goods production by laborers. For the veterans’
effect, the VA’s education assistance behaves as a large infusion of human capital, increasing the
productivity of the population. Socially, human capital can affect other people through peer
effects and through improvements in the quality-of-life of the capital recipient’s household
(Becker 1962).³

In the area of health, the VA is charged with providing post-service medical care to
veterans throughout their lifetime (Beresford 2005). While the availability of medical care
improves the quality of life of veterans, the growing veteran population and the growing cost of
medical care pose significant challenges to the VA’s ability to continue providing the service. To
maximize its effectiveness, the VA has been forced into a position of health-care innovator
(Oliver 2007). According to Oliver (2007), budgetary constraints have forced the VA to invest
more in inpatient care services while balancing out the importance of primary, specialty, and
acute care. The success of the VA is built on a foundation of considerable investment in health-
services research and nonfinancial competitive incentives (Edes, Shreve, and Casarett 2007;
Fisher and Welch 1995). The VA has led the medical community in the development and
adoption of an electronic medical records system, which, in turn, capitalized on technology
advances developed to maximize the patient-physician relationship (Hollingsworth and Bondy
1990; Oliver 2007). The success of the VA at innovating the delivery of health-care services has
not only led to its outperforming other health-care providers in the United States, but it has
served as a guidepost for quality and condition of care in the health-care industry (Asch et al.
2004).

The economic and social impacts of the VA are not limited to the VA’s educational and
health benefits; two additional impacts exist. The first is competition in the market. By providing
home loans and small business loans to veterans, the VA creates competition within the banking industry. Further, by advancing medical care, the VA creates competition within the health-care industry by providing medical services, developing new technology and processes, and employing well-trained physicians. The second is an efficiency effect, in which the VA can use its resources in a manner that gives the organization and its customers the best service possible. Within the efficiency effect is the opportunity for both the VA and other government agencies to fund programs that might have a possible benefit to recipients and the economy at-large. According to modern economic theory, each of these activates can spill over into the economy and produce economic growth (Barro and Sala-i-Martin 2004).

This section has sought to extend the defense-growth literature to a post-service effect, termed here a veterans’ effect. Certainly more spillovers than those listed here exist. To varying degrees, each of these spillovers has a role to play in the hospice care provided by the VA. However, the laying of the foundation for a veterans’ effect is important to the article both in terms of separating itself from the defense effect as well as providing grounding for future veterans’ studies.

Hospice Care in the United States

To understand the involvement in and impact of hospice care by the VA, attention must be given to the history and intent of hospice care as a medical field in the United States. Hospice is a type of medical care and a philosophy that focuses on the palliation of the symptoms of a terminally ill patient at the end of life. Generally undertaken as a team approach, hospice care includes the management of a person’s physical, social, spiritual, and emotional needs during the dying process. The focus of hospice is on quality and compassionate care for a patient rather than on curing the patient’s illness. Although hospice services are most commonly provided at home,
they may also be provided in hospice centers, hospitals, nursing homes, and other long-term care facilities. The origin of hospice can be traced to the Crusaders during the 11th century when, in the absence of modern medicine, death and dying were a part of everyday life (Lewis 2007). It was not until after World War II that advances in medicine allowed for the treatment of illness and the prolonging of life. In the search for a “cure,” death was no longer so readily accepted (Glaser and Strauss 1965).

The tradition of hospice came to the United States in 1971 with the establishment of Hospice Inc. in Connecticut (Connor 1998). Two years later, the firm opened the first inpatient facility devoted exclusively to hospice services. By the mid-1970s, the hospice movement began to develop rapidly, with the creation of hospice programs across the United States. Legitimacy of the movement, however, did not come until 1978 with the establishment of the National Hospice Organization. Unlike its European counterparts, which focused on end-of-life care provided at an inpatient hospice facility, the movement in the United States focused on home care. Not only did Americans prefer to die in their own homes, but the anti-establishment atmosphere of the 1970s led many to distrust health-care institutions. Also, the rising costs of health care made home-based options more attractive (Paradis and Cummings 1986). Following its success, the number of hospice providers increased from 1 in 1971 to 4,850 providers with an estimated 1.45 million patients in 2008 (see Figure 2). According to the NHPCO (2012), more than 38% of all deaths in the United States during 2008 occurred under the care of a hospice provider.

[Figure 2 about here]

In the early years of the hospice movement, coverage of patient expenses was limited to reimbursement for the components of care, such as acute hospitalization and services provided by home-care agencies. In 1978, however, the U.S. Department of Health, Education, and
Welfare announced that Medicare and Medicaid would fund a two-year hospice demonstration project in an effort to reduce health-care costs. The possibility of these savings at a time of economic decline, coupled with the growth in Medicare, led President Jimmy Carter to direct the Health Care Financing Administration to examine the benefits, costs, and feasibility of having hospice added to the Medicare program (Lewis 2007; Mor and Masterson-Allen 1987).

In 1982, Congress formally included hospice as a Medicare Part A benefit as a cost-savings provision after a Congressional Budget Office study asserted that hospice would result in sizable savings over conventional hospital care (Lewis 2007). At the same time, Blue Cross/Blue Shield and a number of other insurers began to offer hospice as an insured benefit. While hospice coverage varied, Medicare’s benefit included supportive care, excluded medical care, and was only available to patients whose end-of-life diagnosis allowed six months or less. Since Medicare’s hospice benefit became permanent in 1986, it has emerged as the single largest financer of hospice services. An overview of the sources of payment for hospice care is provided in Table 1.

**Hospice Care in the VA**

Although Medicare did not begin hospice coverage until 1982, the VA has provided a form of hospice care to veterans since the beginning of the hospice movement in the 1970s (Beresford 2005). At the time, the 16 million veterans from World War II were beginning to turn 65, and the VA began to recognize that the veteran population under its care was about to be larger, older, and afflicted with more illness than previous generations of veterans (Frahm, Barnett, and Brown 2011). There was also evidence that terminal veterans preferred fewer life-
prolonging treatments than the general population (Duffy et al. 2006). Overall, the VA was faced with a growth in demand for services it was ill-equipped to handle.

Drawing upon previous successful collaborations between the government and medical schools, Geriatric Research, Education and Clinical Centers (GRECCs) were established in 1975 at six VA facilities (Shay and Burris 2008). By 1980, the VA had gained authorization to increase the number of centers to fifteen. However, major national efforts to expand the VA’s hospice services did not begin until 1992 with the issuance of VHA Directive 10-92-050, which mandated the formation of hospice consultation teams, and VHA Directive 10-92-091, which established formal hospice programs. VA policies were again expanded in 2003 with the issuance of VHA Directive 2003-008, which mandated the establishment of teams focused on palliative and hospice care at all VA facilities (Wolfsfeld, Zhu, and Hendricks 2004). According to the NHPCO (2012), government-owned hospice programs, such as those run by the VA, account for approximately 4.2% of hospice providers.

It is important to note that, while both the VA and Medicare provide a hospice benefit, the hospice and palliative care benefits provided by the VA differ from those provided by Medicare in several important aspects (Wolfsfeld, Zhu, and Hendricks 2004). First, Medicare hospice services are primarily provided in the home, whereas the VA’s benefits are provided on an inpatient basis. Second, Medicare services require certification of a life expectancy less than six months, whereas hospice care is provided within the VA regardless of life expectancy. Third, there is also a broader application of hospice within the VA to include for the care of chronic and acute conditions that exacerbate the illness responsible for the terminal diagnosis. Finally, there is a fundamental difference in the means of financing. While Medicare is financed through
general revenues, payroll contributions, and beneficiary premiums, VA services are funded through the federal budget, creating different sets of financial incentives for program caregivers.

**Veterans Hospice and the Economy**

The issue of economics within the VA may be understood as an economic growth effect, such as the effect pointed out in the defense-growth literature. However, it can also be understood in a public economics context (i.e., the efficiency and effectiveness of the VA in using its available resources). In this light, we begin with a discussion of hospice care as an efficiency tool within the VA’s medical coverage. We then progress through the social implications of VA hospices.

**Financial Efficiency**

Providing hospice care for veterans stems from a commitment by the VA to ensure quality of care, while maximizing the economic efficiency of the financial resources entrusted to the organization. For example, the hospice care benefits currently offered by the VA are considered the gold standard, as these benefits surpass those offered through Medicare, which is limited by the requirement of certification of terminal illness every six months. Currently, Medicare benefits require that the terminally ill patient exit curative care coverage and enter palliative care and vice versa if the patient’s condition improves. However, this is not a requirement for the VA hospice care program, which allows the terminally ill patient to receive curative and palliative care simultaneously as needed. This makes it easier on the family and the veteran by reducing family and program costs associated with the certification of terminal
illness, as well as ingress and egress from curative care (Wolfsfeld, Zhu, and Hendricks 2004).

The challenge facing the health-care industry in the United States resides in finding ways that will enable doctors to do more, and do better, with less. Figure 3 provides an overview of the growth rates of the VA’s total medical care expenditures, Medicare expenditures, and gross domestic product (GDP) from 1970 to 2010. Figure 3 highlights that, regardless of inflation, the costs associated with government-assisted medical care have increased over time. Not only are medical costs rising, but the population is aging. Further complicating the issue is the increase in demand for medical services relating to chronic and acute conditions. The VA, whose veteran clientele typically demonstrate a lower quality of health as a result of military service (Agha et al. 2000; Bedard and Deschenes 2006), is no exception. While the VA does provide similar types of medical coverage as Medicare and private insurance, its mode of funding is uniquely different. Medicare and private insurance rely on a pay-for-service model of health care, compared to the VA, which relies upon the federal budget process for financial resources.

[Figure 3 about here]

The politically driven nature of the VA budget creates an incentive for the VA to avoid costly end-of-life care. Because hospice care is focused on the palliation of a terminally ill patient’s symptoms rather than treatment, it is generally believed that hospice care is a more efficient use of resources, given that the result of both approaches concludes with the end of life (Robinson and Pham 1996). Following the constraint upon VA resources, the widespread provision of hospice care can produce a trade-off in that the resources that could have been deployed for treatment could be used elsewhere. However, this is contingent upon the ability of hospice care to provide a large enough savings over other, more traditional medical care. A
number of studies comparing the two types of care—palliation versus treatment—have been conducted (Emanuel and Emanuel 1994). Although there is variation in the degree of savings, the literature suggests that the utilization of hospice care during the last month of a terminally ill patient’s life will save between 31% and 64% on total medical costs relative to treatment. These savings are associated with the length of stay in hospice care, with the largest savings coming during the last weeks of life (Greer et al. 1983; Mor and Masterson-Allen 1987; Mor et al. 1988; Robinson and Pham 1996).

Specific to the VA, Frahm, Barnett, and Brown’s (2011) study of hospice trends among veterans found that the cost of providing hospice care to a veteran ranged between $3,600 and $4,400. Perhaps more importantly, they note that while the VA’s hospice expenditures have increased over time, the cost per veteran patient has remained relatively stable. This suggests that expenses related to hospice care are more resistant to increases than is traditional treatment-oriented medicine. It also suggests that participation with VA hospice care has increased. Although the VA has not recorded precise data on the use of its hospice services, it is believed that about 10% of all VA nursing home patients, and 17% of all veterans who die within the VA, utilize hospice and palliative care (Wolfsfeld, Zhu, and Hendricks 2004). In 2007, the usage rate among veteran users of the VA hospice system reached an estimated 9,000 veterans (Office of Public Affairs 2008).

[Table 2 about here]

The drive toward financial efficiency through hospice can be seen in Table 2. Table 2 provides the expenditures, budget, and the budget request for the VA’s medical programs from 2011 through 2014. It provides an overview of expenses related to hospice, long-term care, and total medical care. Within the VA budget, expenses related to hospice care are accounted for.
within the long-term care program, which provides the assistance delivered in nursing homes, hospice, geriatric care for non-acute conditions, and the total medical care. Total medical care provided by the VA does show a trend toward positive growth, but that rate of growth is slower than its subparts. From 2011 to 2014, total medical care is expected to grow an average of 5.6%, compared to 8.2% for long-term care and 17.9% for hospice. As hospice and long-term care grow at a faster rate than the total medical care, they become increasingly dominant and reflect a change in VA priorities. That is, resources are redirected from acute care services to long-term care in order to provide for the aging veteran population.

Further movement toward the efficient utilization of its resources can be seen in the VA’s allocation of the long-term care program. An aging veteran population has led to an increased need for long-term care services. Not only have the annual expenditures of these services increased yearly since the VA first began providing them, but they are expected to increase an additional 26.5% (about 8.2% each year) between 2011 and 2014. During the same time, hospice expenditures are expected to increase 63% (about 17.9% each year). Growth in anticipated hospice expenditures, however, reflects a change in the priorities within the long-term care program. Taken in conjunction with the relative stability of per-patient hospice expenditures within the VA, the growth in total hospice expenditures suggests an increased number of veterans are opting for hospice care, which is one of the qualitative aims of the VA hospice care initiative. The qualitative choices offered to veterans in the form of hospice care benefits suggests that a quantitative spillover effect follows as resources are freed up to be allocated elsewhere.

**Legitimacy of Death**
The other issue of discussion is perhaps the most important: the legitimization of death. By focusing on the palliation of symptoms, hospice providers and recipients are accepting defeat, admitting that a life cannot be extended. This is contrary to the essential code that underlies the provision of health care in the United States, which is focused on prolonging life. The special contribution of the VA hospice program is that it has encouraged a cultural and institutional shift in how terminal patients are treated. This legitimization comes in two ways: first, it comes through an open dialogue about death and the dying process; and, second, the development of hospice-related training and education.

Concerning the open dialogue about death, the VA was, and continues to be, an innovator of hospice care within the United States. The outcome of the introduction of hospice to the VA system has been a cultural shift that promotes palliative care very early on in a patient’s terminal illness journey, bridging the gap between early signs of terminal illness and end-of-life hospice care. As previously mentioned in this study, the VA has been providing some form of hospice care since the mid-1970s. According to the VA, a goal of the hospice program has been to “institutionalize, in the best sense of the word, hospice and palliative care … proactively creating an end-of-life care system while implementing permanent changes, making it an integral part of what VA is” (Beresford 2005). Due to the VA’s focus on providing quality care to veterans and the salaried nature of doctors within the VA, recipients of the services are less likely to feel that hospice care was imposed for financial reasons. Rather, hospice has been viewed by veterans as a way to manage quality of life (Duffy et al. 2006).

Within the rest of the health-care industry, there is a disconnect between patient wishes and the interest of insurance providers. The general perception is that patients distrust the industry, leading physicians to overtreat as a mode of gaining trust. This perpetuates the practice
of treatment through the end of life rather than a palliative approach. The kind of integration seen in the VA has only recently begun to happen within the private sector. It was only after the VA began to see success with the program that the provision of hospice within Medicare and other insurance providers was discussed as an option. In recent years the number of terminally ill patients utilizing hospice services and the perception of hospice as an acceptable solution have both begun to rise (Connor 1998). Acceptance is furthered by the VA’s partnership with community hospice programs. To date, the VA has partnered with community hospice programs in 35 states to promote hospice services not directly provided by the VA staff. These partnerships help veterans transition from VA hospitals to their homes in the community. Due to the financial difficulty of running a hospice facility (Connor 1998), the partnerships help fund hospice care in communities that might not otherwise be capable of maintaining the facility.

To further legitimize hospice care, the VA has led the health-care industry in the development of hospice education and practices. Legitimization through education brings acceptance through awareness and formality. The spread of the hospice movement over the past forty years has created a need for proper training of health staff. As an early adopter of hospice care, the VA fulfilled this need by developing a curriculum for physicians in residency and establishing a fellowship program for further training and education (Lewis 2007). The establishment of a training program not only provided a foundation as to what hospice care means, but it also provided a guide for others to create or engage in hospice services without the risks associated with developing a program from the ground up.

The primary mode of hospice research and education has been the GRECCs that were established in 1975. As collaborations between the VA and medical schools progressed throughout the United States, six GRECCs were created in 1975, and another 14 have been
established since then (Shay and Burris 2008). Each center is comprised of a clinical component, a research component, and an education component. Through research and clinical work at the VA, the GRECCs work to understand the illnesses facing elderly patients and the effects that rehabilitation will have on their condition. By including hospice care in their lines of study, the GRECCs have been able to understand the social effect that hospice services have on the patient in terms of bringing closure to life, and on the family in terms of acceptance. From the education component, the GRECCs work to bring scientists and students from the health sciences into geriatrics as a way to help health-care providers better understand the aging process and to provide higher levels of care. On the hospice level, this includes introducing the scientists and students to the concepts of hospice and to quality-of-life issues during the end of life. In regard to a social spillover, these centers provide quality hospice care to the veteran population, while training many health-care professionals who will provide that care for years to come.

One such training program was the VA’s Training and Program Assessment for Palliative Care (TAPC). The main goal of TAPC was to assist in the growth and improvement of palliative care services by providing information and tools (VA Training and Program Assessment for Palliative Care [TAPC] Project 2001). An important component was the design and implementation of curricula focused on training internal medicine physicians with unparalleled skills in palliative and end-of-life care.

The pursuit of quality hospice care within the VA does not end with the GRECCs. The VA has continued to forge collaborations with other institutions to conduct research and establish best practices (Hamaker 2010). For example, VA–funded partnerships between Northwestern University’s Feinberg School of Medicine and the University of Alabama at Birmingham resulted in the first palliative care education program designed to meet the needs
specific to veterans. As part of its Quality Enhancement Research Initiative, VA collaborations have also created palliative quality measures and procedures across the VA health system (National Cancer Institute 2012).

**Conclusion**

There is a significant and growing literature that discusses the impact of the defense sector on economic performance. Although this literature has advanced the understanding of the military and society, it has focused only on a single aspect of the issue: the externalities and spillovers generated by the defense sector. In addition to the defense effect, it is possible that a veterans’ effect also exists. This article represents an early attempt to understand that veteran effect though the economic and social spillovers of the VA’s hospice program.

The conclusions of this study are centered on the financial efficiency of hospice care and hospice’s legitimacy throughout the United States. By investing in hospice care for an aging veteran population, the VA is able to reallocate the savings it would have spent on a full medical treatment approach to end-of-life care for veterans. This reallocation creates an environment of efficiency within the VA. Such efficiency would also reduce the funds needed by the VA, allowing legislators to fund other government programs at a higher rate or to reduce the size of the federal budget. By establishing hospice programs in each of its facilities and training medical professionals in hospice care, the VA fosters a social environment whereby the acceptance of a patient’s end of life by physicians and the greater medical community allows for a more personalized dying process.

One concern that is raised by VA-provided hospice care in economic terms is that it opens the possibility of abuse. If hospice care is used as a tool for financial efficiency, then the
The absence of rules to require the VA to certify life expectancy can lead to a perverse set of incentives. Included in these incentives is the opportunity of VA administrators to encourage hospice care even when medical treatment is still a viable option. Whether these types of incentives can be controlled through regulation remains uncertain.

There is still much to learn about the veterans’ effect within the United States. The next steps in this direction, however, should focus their attention on access to information. Although the VA does collect a substantial amount of data on its services, access to this information is heavily restricted. For example, although the accounting system of the VA allows for the determination of hospice usage rates and expenditures over time, this information can only be obtained through the medical records of veterans. Other data collected by the VA is compressed into large-scale measures. Once this data is made publicly available, researchers can begin to quantify the veterans’ effect, including that of the hospice spillover discussed here.
References


Figure 1. Veteran Population in the United States, 1980–2010 (in thousands)

Figure 2. Number of Hospice Patients in the United States, 1984–2010

Source: National Hospice and Palliative Care Organization (2012)
Figure 3. Economic and Spending Growth Rates, 1970–2010

Source: Office of Management and Budget (2012)
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<th>2007</th>
<th>2008</th>
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<td>Managed Care or Private Insurance</td>
<td>8.5%</td>
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<td>Medicaid Hospice Benefit</td>
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<td>Other Payment Source</td>
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<td>0.8%</td>
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Source: National Hospice and Palliative Care Organization (2012)
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Source: U.S. Department of Veterans Affairs (2012)
Endnotes

1 For a detailed discussion of the defense-growth relationship, its literature, and effects, see Gleditsch, et al. (1996), McDonald (2012), and Sandler and Hartley (2007).

2 The term defense effect refers to the measured outcome of the defense-growth relationship.

3 For a detailed discussion of the education investments by the defense sector and the VA, see Borjas and Welch (1986), Cardell et al. (1997), and Loughran (2002).

4 The provision of services was expanded in 1996 with the issuance of a hospice program guide outlining the clinical and operating guidelines for the VA hospice program. In the same year, the Veteran’s Health Care Eligibility Reform Act integrated hospice and palliative care into the standard benefit package for all veterans.

5 Total medical care includes all expenditures related to long-term care and acute care.

6 The decision to enter into hospice care is conducted through a discussion among the patient, the patient’s caregiver, the patient’s doctors, and a VA social worker regarding the need for or interest in hospice. To assist in this process, the VA provides a series of assessment worksheets (Office of Geriatrics and Extended Care 2012).

7 Traditionally, medical doctors are paid on a salary plus production basis, which incentivizes doctors to over-provide care. Within the VA, doctors are salaried, receiving the same pay regardless of the number of patients treated or tests performed. This creates an environment in which doctors are primarily interested in patient care. For more on the economic incentives of doctors within the VA, see Levinsky (1986).