Military Veterans as a Health Disparity Population:

Is Service a Determinant of Health?

By

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ABSTRACT

Millions of military Veterans live in the United States (U.S.), with service spanning decades of global conflicts. Despite rigorous health requirements while on active duty and access to one of the largest health systems in the U.S., Veterans report poorer overall health and experience a number of risk factors that can cause adverse health outcomes. Health disparities occur within the Veteran population, similar to those experienced within civilian populations. However, Veterans can also be considered a distinct group that suffers health inequities when compared to their civilian counterparts, with military service being a future determinant of health. As such, this paper will explore Veteran disparities, identify risk factors leading to them, and describe existing programs to address them. Research, policy, and program recommendations to further address Veterans’ health inequities are included.

Key words: Veterans, Health disparity, Access to care
ACKNOWLEDGEMENTS

Over nine years of working with active duty military and Veterans, I have had the opportunity to watch not only the valiant sacrifice and honor with which they have conducted their careers, but also to witness the difficulty and struggle many have experienced in accessing health care. During my work with the Warrior Transition Battalion at Fort Carson, CO, I realized that although many resources are available for military members transitioning to civilian life, they are often disorganized or difficult to access, and that few of them were public health resources. Furthermore, not all military members have the benefit of several months of concentrated transition planning, and despite the efforts of a number of people, many Veterans will end up slipping through the cracks of the system. What happens when soldiers are transitioned to civilian life, often unprepared for the health challenges they’ll face? How does this impact communities, and the health of both the Veteran and the public? With these questions in mind and a desire to lay the groundwork for future qualitative research, I chose to explore how Veterans experience health disparities and whether public health is doing enough to serve them. With that, I would like to acknowledge each of my Veteran friends, all soldiers I cared for as they transitioned to civilian life, my active duty colleagues, and each person who has served in the U.S. military.

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CHAPTER I
INTRODUCTION

Scope of the Problem

Over 1 million military Veterans in the U.S. are without health care coverage (Kliff, 2013), and of those who do have coverage, many may experience barriers to care. Mismanagement of resources by the Veterans Association (Department of Veterans Affairs, Office of Inspector General [DVA OIG], 2012, 2015), leading to delays in care and poorer health outcomes, have been reported (DVA, 2013a; Fessenden, 2012; Griffin, 2013; Jones, 2014; Kliff, 2013; Montagna, 2015; O’Toole, Johnson, Redihan, Borgia, & Rose, 2015; DVA OIG, 2012, 2015).

As military members transition to civilian life, they enter the community having already experienced variables that put them at risk for poor health in years to come. Many experience mental and physical stress which may lead to Post-Traumatic Stress Disorder (PTSD), depression, anxiety, and injury (DVA, 2015c; National Alliance on Mental Illness [NAMI], 2009). Poor lifestyle habits, such as substance and tobacco use, can lead to higher rates of respiratory diseases, heart disease, and cancers. Environmental exposures like toxins, chemicals, and blasts can result in a variety of illnesses and injuries, including traumatic brain injuries (TBI) (DVA, 2015a; Substance Abuse and Mental Health Services Administration [SAMHSA], 2015).

A population experiencing gaps in health due to inequitable exposure to health risk factors, leading to a decreased quality of life compared to other segments of the population, is considered a health disparity population. Veterans report poorer health
than their civilian counterparts (Kramarow & Pastor, 2012; Fessenden, 2012), thus meeting the definition of a health disparity population. While many programs exist to assist Veterans to live healthier lives, they continue to experience poorer health. Public health is well-aligned to partner with military and Veteran organizations to assist the Veteran population to live healthier lives. Opportunities include conducting research on existing barriers to health care access and exploring social issues preventing Veterans from avoiding health risk factors. Public health can also assist in developing policies and programs to close the gaps in health they experience.

**Purpose of the Paper**

Understanding the Veteran population and the risk factors and health care barriers they experience, in comparison to civilian populations, is necessary to develop programs and policies to address gaps in health care. This paper will examine the Veteran population, including demographics, health outcomes over time, and health care access. It will also discuss how Veterans experience health disparities in mental health, cancer, obesity, and diabetes. Factors contributing to health disparities, such as wartime exposures, poor health care access, and transition planning, will also be explored. Finally, existing programs to reduce health disparities and recommendations for future research, program development, and policies will be covered.
CHAPTER II
BACKGROUND

Definitions

Disparity

Disparity is defined as a difference, especially one connected with unfair treatment (Oxford Online Dictionary, 2015). Disparities can include large gaps in wealth, regional differences in education attainment, or geographical differences in race, ethnicity, or gender composition.

Health Disparity

Public health focuses heavily on addressing health disparities and how to alleviate them. A health disparity is defined as:

a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced great obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age, mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion. (Department of Health and Human Services [DHHS], 2014, para. 6)

Military Veterans have not typically been considered a separate health disparity population. Just as is found in the civilian population, inequities exist within the Veteran population, such as differences in health outcomes based on race or ethnicity,
geographic location, and gender (Harris, 2011). However, despite access to the largest health care system in the U.S. and rigorous health requirements during times of active military service, male military Veterans suffer poorer health than their civilian counterparts (Kramarow & Pastor, 2012). Female military Veterans also report poorer overall health than non-Veteran women (Fessenden, 2012).

Veterans, as well as the civilian population, are subject to the influence of determinants of health such as behavior, health services access, socioeconomic status, policy, education attainment, and environment (DHHS, 2014). In addition to these, military-specific determinants may exist and contribute to overall disparities. Harris (2011) cited demographic shifts, differences in access even in an “equal access” system, military culture, and provider disengagement as additional factors that may contribute to health disparities experienced by military Veterans.

Health Outcomes of Veterans Through Time and Conflict

Of the living 6.5 million living pre-9/11 Veterans who served from August 2, 1990 to September 10, 2001, 1.5 million receive compensation. All but 1,710 of those receiving compensation have received a 10% or higher disability rating, indicating that at least a quarter of those who served during that time sustained some level of service-related disability. Over 55% of these received ratings of 10% to 40%, with over 60% receiving ratings for up to five separate disabilities (Department of Veteran Affairs [DVA], 2015b). Over 2 million pre-9/11 era Veterans were enrolled in Veterans Administration health care. Between 2009 and 2013, hospitalizations in this cohort increased 69.8% and outpatient visits increased 94.7%, indicating a significant increase in health care utilization (DVA, 2015b).
Population Description and Demographics

The DVA (2014b) projects by the end of September 2015, over 21.6 million Veterans will be living in the U.S. Actuarial tables predict this number to decrease by about 7 million by September 2043, barring future conflicts (Figure 2.1).

Of those living, 72% are over the age of 50 and 91% are male. Seventy-five percent of those living are wartime Veterans, over 7 million of whom served during the Vietnam era (DVA, 2014d). The number of Veterans who served during the Gulf War era, both pre- and post-9/11, is expected to grow over time as military members currently still engaged in their careers begin to retire (Figure 2.2). Seventy-seven percent are white, non-Hispanics (DVA, 2014e), followed distantly by Black/African Americans at 12% (Figure 2.3). Almost half, 43%, served in the Army (DVA, 2014c). California, Texas, and Florida, respectively, house the greatest numbers of living military Veterans. In FY2014, over $59 billion was paid in Veteran medical expenditures (DVA, 2014a).

Health Care Access

According to the DVA (2015b), any military member who served on active duty and was honorably discharged is considered a Veteran. Not all Veterans qualify for health care benefits through the VA health system. To meet the basic eligibility requirements, a military member must have served on active duty and serve 24 continuous months of service, unless discharged for a disability, hardship, early out, or served before September 1980. There can be exceptions to this rule which are considered on a case-by-case basis. Once an application is accepted, an individual is assigned a priority group for enrollment (DVA, 2015c). The DVA reports that between
FIGURE 2.1
ESTIMATED VETERAN POPULATION, 2013-2043

Source: Adapted from by the Department of Veteran Affairs (2014b)
FIGURE 2.2

ESTIMATED VETERAN POPULATION BY CONFLICT, 2013-2043

Source: Adapted from by the Department of Veteran Affairs (2014d)
FIGURE 2.3

VETERAN POPULATION BY RACE/ETHNICITY, 2015

Source: Adapted from the Department of Veteran Affairs (2014e)
October 2014 and August 2015, more than 46,000 VA benefits eligibility applications were received and that 89% of those applications were processed within 5 days. However, the Department of Veterans Affairs, Office of the Inspector General (DVA OIG) (2015) reports that as of September 2014, more than 307,000 applications were for individuals who died after they submitted applications but before the application was accepted—it was still in pending enrollment status. The backlog of pending applications has led to lost eligibility for some Veterans and delayed necessary health care, thus presenting an important access barrier. The data system that tracks enrollments did not always report an application date, and the system does not separate out general benefits applications from health care benefits applications (DVA OIG, 2015). Lacking these variables, the picture of health care access is incomplete. Additionally, the DVA OIG (2015) investigation found an additional backlog of 867,000 pending applications, and more than 10,000 unprocessed applications were erroneously marked “processed.” While these problems exist for the VA benefits system as a whole, the ramifications to health care access in terms of long wait times to enroll to health benefits represents hundreds of thousands of Veterans potentially unable to meet their health care needs.

In 2013, CNN Journalist Drew Griffin (2013) reported that Veterans already enrolled in VA health benefits and seeking various procedures were dying while waiting to receive referrals to needed medical care and waiting up to 10 months for appointments. Patients with life-threatening diseases, such as cancer, suffered poor outcomes from late disease detection and experienced treatment failures due to delays in care (Griffin, 2013).
While the VA health system itself presents access challenges, other barriers exist for Veterans in gaining access to health care. About 1.3 million Veterans did not have health insurance in 2013 (Kliff, 2013). Only one in ten of these uninsured Veterans qualified for Medicaid, leaving over 1 million without coverage. In states that have enacted Medicaid expansion, this number could be lower depending on income eligibility of Veterans living there.

Health care access barriers for Veterans include geography. Over 40% of military Veterans live in rural areas, often many miles from the nearest VA clinic. In 2014, the Veterans Access, Choice, and Accountability Act allocated 10 billion dollars to pay for health care outside of the VA system if an enrollee lives more than 40 miles from a VA clinic or faces more than 30 days wait time to get an appointment for care (Philpott, 2014). The act also enhances VA health care access by expanding staffing and building or renting clinic space. This bill is estimated to impact 500,000 Veterans who are already enrolled, but does not impact those who do not currently have VA health benefits.

Not all Veterans qualify for Veterans’ benefits and not all apply for benefits for which they qualify; in 2012, only 37% of eligible military Veterans were enrolled in VA care (Hoerster et al., 2012). Those individuals applying for benefits must submit official proof of service that meets a variety of active service criteria, which can be complex, especially for Veterans who have served in National Guard or Reserve capacity or have multiple service periods (Szymendera, 2015). For those who have complex military discharges that do not fall solidly into an “other than dishonorable” category, determination of eligibility for health care benefits can be a lengthy and tedious process.
Barriers to health care access other than eligibility, enrollment, and other systems issues can impact a Veteran’s ability to seek and receive care. A study of 185 homeless Veterans found that, despite the need for care and generally qualifying for free or low-cost VA care, participants did not seek care due to issues of trust, stigma, and care processes (O’Toole et al., 2015). While homelessness does not affect all military Veterans, the access barriers they experience relate to limitations experienced by a broad variety of Veterans. For instance, the study identified that many homeless Veterans did not seek needed care out of fear for how they might be treated; reports of unprofessionalism in the VA health care system have circulated widely for years, though formal reports of this appear to be rare. Homeless Veterans in the study identified receiving health care for their ongoing medical needs a necessity for them to leave homelessness (O’Toole et al., 2015).
CHAPTER III
HEALTH DISPARITIES

Types of Health Disparities

Despite having better health care access than many civilians, Veterans report poorer health overall than civilian counterparts on a variety of health indicators (Hoerster et al., 2012). Veterans enrolled in the VA health system also have a higher prevalence of medical conditions than civilians overall (Hoerster et al., 2012). Yet, Veterans have been shown to participate more in preventive care such as physical activity, indicating that the disparities that exist between Veterans and civilians are likely due to a number of factors (Hoerster et al., 2012). Various health disparities will be discussed including mental health, cancer, obesity, and disabilities.

Mental Health

Mental health concerns encountered by both active duty and Veteran military members in recent years have been widely publicized, especially related to suicides and PTSD. Psychological distress from a variety of military environments and stressors have led to 18.5% of Iraq and Afghanistan Veterans reporting PTSD or depression. Compounding this issue are the nearly 20% of Veterans who have experienced TBI during combat. Alcohol and substance abuse also disproportionately affect military Veterans with 7.1% of this population qualifying for a substance abuse diagnosis (SAMHSA, 2014a). Half of Veterans who need it will seek out mental health care; of those, only half will receive adequate services (SAMHSA, 2014b). Among the many negative outcomes arising from a disproportionate number of Veterans suffering from
mental health disorders is homelessness; a survey of 23,000 homeless Veterans across the country found that over half (55%) reported a mental health condition, and 76% reported substance abuse. Twenty seven percent of homeless Veterans who served in Iraq or Afghanistan reported TBI. Despite VA services for the homeless, no correlation between homelessness and access to VA care was found (DVA, 2013a).

**PTSD.** Given the stress and violent nature of war, extreme emotional distress affects military Veterans; in fact, PTSD has afflicted Veterans from all military conflicts (DVA, Office of Public Affairs, 2015). PTSD is often debilitating and includes life-altering symptoms such as re-experiencing the trauma; nightmares or flashbacks; avoidance of situations such as crowds; negative beliefs and feelings toward self and others; a view of the world as a dangerous place; and hyperarousal leading to insomnia, startling, and difficulty concentrating. While many people improve over time, symptoms can persist for many months and negatively impact home and work, leading to difficulty gaining or keeping employment (Stone, 2014).

Prevalence of PTSD differs by conflict, though prevalence from all military conflicts exceeds that which occurs in the civilian community. According to the National Vietnam Veterans Readjustment study, the lifetime PTSD prevalence for Vietnam Vets was as high as 30.9%; for Gulf War Veterans studied between 1995 and 1997, the prevalence was between 10.1% and 12.1% (Gradus, 2015). PTSD prevalence for Veterans involved in the most recent conflict, Operation Enduring Freedom/Operation Iraqi Freedom, was 13.8% (Gradus, 2015). This number is likely to change given ongoing operations in the current theater of war. According to the National Comorbidity Survey Replication, the lifetime prevalence of civilian Americans is estimated at 6.8%,
significantly lower than Veterans from any conflict (Gradus, 2015).

**Suicide.** Active duty and Veteran suicides have garnered national attention in recent years. Veterans comprise 20% of suicides occurring in the U.S. Each day, 22 Veterans die from suicide; 3 out of every 5 Veterans committing suicide have a mental health condition (SAMHSA, 2015). In 2007, Veterans Affairs began to focus on reducing Veteran suicide rates and in 2008, initiated surveillance and prevention support to help decrease suicides. Despite these efforts, by 2011 VA users under age 30 had increased suicide rates; these rates were even higher for Veterans not using VA services (Kemp, 2014). Fewer than half of Veterans with mental health disorders will receive adequate care for their condition, despite VA access. A study of Veteran suicides occurring between 2009 and 2011 found that over half (51%) had seen a health care provider in the 30 days prior to suicide, and 43% saw a mental health provider within 90 days prior to suicide (Smith, Craig, Ganoczy, Walters, & Valenstein, 2011). Inadequate antidepressant treatment and a lack of focus on mental health diagnoses by primary care providers indicates missed opportunities for early referrals to mental health care services and helping prevent deaths in this population (Smith et al., 2011). Numerous resources have been established to support Veterans with mental health conditions, including the Veterans Crisis Line, Partners in Care programs, and numerous community-based assistance programs (SAMHSA, 2015). Although efforts in the community and within the VA system have affected some change in suicide rates by subpopulations, i.e., decreased rates in older male populations, the overall suicide rates have remained essentially unchanged and are significantly higher than those for civilians (Kemp, 2014).
Depression. Suicide and depression are closely linked; some research indicates that improved treatment of depression symptoms in individuals is associated with lower risk for suicide (Smith et al., 2011). Veteran men and women report higher incidence of lifetime depression than civilians (Hoerster et al., 2012). Care for Veterans diagnosed with depression costs over $9 billion yearly, accounting for 14% of the $66 billion spent on depression annually in the U.S. Of 206,000 Veteran records assessed, one in three had at least one mental health disorder. While Veteran depression rates have been reported at 14%, depression is commonly under-diagnosed (National Alliance on Mental Illness [NAMI], 2009). The burden of depression in the Veteran population is over twice that suffered by U.S. civilians, which was 6.7% of the total population in 2013 (National Institute of Mental Health, 2013). Given that fewer than half of eligible Veterans are enrolled in VA care, they may not seek mental health care; or providers may have poor understanding of the unique factors impacting the development of depression in military populations, such as TBI and PTSD.

Substance Abuse. Mental health and substance abuse disorders are the leading cause of hospitalization among the U.S. military. By 2006, over 7% of Veterans met the criteria for substance abuse disorders (SAMHSA, 2014b). Comparatively, the National Survey on Drug Use and Health (NSDUH) reports substance abuse in 8.2% of the U.S. population over age 12 (SAMHSA, 2013); however, Veterans are included in NSDUH methodology (SAMHSA, 2014a), and thus civilian rates may be lower in comparison once Veteran substance abuse numbers are excluded.

Substance abuse is a major public health issue, contributing to the perpetuation of social problems such as impaired driving, homelessness, crime, unemployment,
stress, and violence (National Institutes of Health [NIH], 2015). Military Veterans may encounter circumstances that put them at higher risk for developing a substance abuse disorder, including the presence of PTSD and other mental health issues. Twenty percent of Veterans with PTSD also have Substance Use Disorder (SUD). In the recent wars in Afghanistan and Iraq, 10% of returning soldiers who were subsequently seen in the VA system reported a problem with alcohol or other drugs, which are frequently used to self-medicate for sleeping problems, pain, and avoidance of other PTSD symptoms (DVA, 2015e). A study of Vietnam Veterans found that substance abuse increased with PTSD symptoms, and self-medication with alcohol or other drugs was a common coping mechanism. Seventy percent of those studied were comorbidly diagnosed with depression, and 79% with alcohol dependence (Bremner, Southwick, Darnell, & Charney, 1996).

**Cancer**

In 2007, approximately 3% of reported cancers occurred in U.S. Veterans with incidence related to gender (97.5% in males) and race (78.5% in Whites). The most commonly diagnosed cancers are prostate, lung, colon, urinary, skin, kidney, liver, non-Hodgkin’s lymphoma, leukemia, and larynx. Prior to 2007, cancer registry data within the VA were not widely publicized; few studies exist comparing cancers in Veterans to those in civilians (Zullig et al., 2012). While comparison of VA-specific registry data to civilian Surveillance, Epidemiology and End Results (SEER) data revealed that cancer incidence in U.S. Veterans was similar to that in the civilian population, some limitations exist. With only 37% of the Veteran population enrolled in VA health care, incidence cases attributed to Veterans are likely underreported. Although cancers are frequently
diagnosed later in life and related exposures may take years to influence the occurrence of cancer in individuals, recent Veterans of Iraq and Afghanistan conflicts may be an emerging population who may disparately experience cancer diagnoses. Cancers related to extensive wartime environmental exposures may not be diagnosed for decades. Exposure to Agent Orange during the Vietnam War was not immediately associated with prostate cancer, and early studies found only weak associations (Chamie, White, Lee, Ok, & Ellison, 2008). However, later studies found that Veterans with exposure to Agent Orange had 2.19 times the odds of developing prostate cancer as those without exposure (Chamie et al., 2008). Veterans of the most recent conflict in Iraq and Afghanistan were exposed to numerous toxins through warfare and via burn pits including chemicals, medical waste, metals, munitions, petroleum, rubber, plastics, and other products (DVA, 2015a). The long-term effects of these exposures may not be known for decades. Additionally, while most Veterans of previous conflicts were men and the number of female Veterans serving in more recent conflicts has been much higher, gender disparities in cancer rates related to environmental exposures may be identified in the decades to come.

**Obesity**

Obesity is a significant risk factor for a number of health conditions, including heart disease, hypertension, diabetes, and osteoarthritis (Nelson, 2006). An analysis of the 2003 Behavioral Risk Factor Surveillance System (BRFSS) data revealed that Veterans have disproportionately higher obesity rates than civilians. Obesity rates for Veterans enrolled in VA care were 27.7% compared to 23.9% for Veterans not utilizing VA care. Of obese Veterans utilizing VA services, 65.8% had hypertension and 31.3%
reported diabetes (Nelson, 2006). Similar trends were seen when factoring in overweight and obesity together, with 72.2% of Veterans using VA care were overweight or obese, compared to 57.4% of the civilian population. The disparity between Veterans and civilians for obesity and the myriad health issues that may arise from it has important implications for future health care needs for this population, increased utilization of health care dollars, and poorer quality of life.

**Diabetes**

Veteran men are more likely to report diabetes than civilian men (Hoerster et al., 2012). Almost 20% of Veterans have been diagnosed with diabetes (DVA, Health Services Research & Development, 2012), compared to 8.5% of civilians in 2011 (CDC, 2014). Mortality rates for Veterans with diabetes approaches 5% per year, double that of the general U.S. population (CDC, 2015), mostly due to cardiovascular disease complications such as heart attack and stroke (DVA, QUERI, 2014).

**Factors Contributing to Health Disparities**

U.S. military members and Veterans encounter various circumstances that lead to higher rates of disease and disability than the general public. Understanding the factors that contribute to this disparity is vital to assist the military to implement programs to prevent the development of health problems. The VA and civilian agencies can then develop programs to adequately address health problems as they emerge and implement policy changes at all levels to ensure that Veterans are able to receive efficient and timely prevention and intervention.

**Wartime Exposures**

Veterans are subjected to wartime exposures which are often well-publicized
during their military careers, impacting their health and well-being. These exposures have typically varied by conflict and are generally not experienced to the same degree by U.S. civilian populations.

**Vietnam War (1965-1975).** The Vietnam War was fought between 1965 and 1975 in frequently heavily forested environments. Millions of gallons of herbicides were sprayed to defoliate forested areas to give U.S. Troops visual advantage. The best known herbicide used was Agent Orange, long suspected to cause physical damage to military members who were exposed to it, though early studies showed weak associations (DVA, Public Health, 2015). However, as time has progressed, some studies have shown stronger associations between exposure to Agent Orange and prostate cancer (DVA, Public Health, 2015). Other diseases presumed to be related to herbicide exposure during this conflict include amyloidosis, diabetes, various cancers, early-onset peripheral neuropathy, ischemic heart disease, liver diseases, and respiratory damage (DVA, Public Health, 2015).

**Gulf War (1990-present).** A number of potential exposures affected Veterans of the Gulf War. The DVA lists exposure to vaccinations such as anthrax and botulinum toxoid, oil well fires, chemical and biological weapons demolition in Iraq, depleted uranium, high noise levels, chemical agent resistant coating on military vehicles, Pyridostigmine Bromide (used to protect against the nerve agent Soman), pesticides, particulates, and several others (DVA, Public Health, 2015). The DVA established a variety of exposure registries with ongoing data collection. However, definitive health outcomes related to Gulf War era exposures have not yet been documented.
**Operation Enduring Freedom (2001-present).** Veterans of the most recent ongoing conflict have been subjected to similar exposures as those who served in the Iraq war. Although many exposures are recent, some health outcomes will not be evident for years, similar to the health impact of Agent Orange. Some of the more acute and immediate health outcomes that have occurred include high rates of TBI and PTSD.

**Iraq War, Operation Iraqi Freedom (2003-2011).** Iraq War exposures are somewhat similar to those encountered during the first Gulf War conflict. TBI, which is associated with mental health issues such as chronic depression, headaches, and other neurocognitive effects (DVA, Public Health, 2015), was recognized as a significant problem requiring attention for the first time during this war. Additional exposures included the use of Mefloquine, also associated with depression, to prevent malaria; sulfur fires and resulting dioxide exposure, chemical warfare agents, and chromium, which is known to cause lung cancers after prolonged exposure (DVA, Public Health, 2015). While military members serving during this conflict encountered a multitude of environmental exposures, ongoing research is necessary to determine the health impact of these exposures.

**Poor Health Care Access**

The ability of Veterans to access VA health care has been newsworthy, with reports of long wait times and cancelled appointments. According to a 2014 Gallup Poll of U.S. Veterans, over half of the polled Veterans reported difficulties in accessing VA services to obtain care (Jones, 2014). While polls are not necessarily scientific and have bias issues, understanding that this viewpoint exists among Veterans, the end users of the VA system, is important. Even a perception of a barrier to access could prevent
Veterans from seeking needed care. Thousands of Veterans died simply awaiting enrollment for needed health care (DVA OIG, 2015).

Eligible Veterans may access non-VA medical services. However they must meet certain eligibility requirements, and except in emergencies, prior authorization and at times referral management is required. Authorization may take time, resulting in delays in care. In 2012, a large Texas VA facility serving 500,000 Veterans was investigated for delays in care for vascular and cardiology referrals. The VA standard for referrals is within 14 days, 98% of the time. However, investigators found that patients awaiting vascular services waited 45 days on average, and then another 28 days for surgical procedures (DVA OIG, 2012). While the VA publishes average wait times for appointments within the VA system (>92% scheduled within 30 days as of September 15, 2015) (DVA, 2015d), very little data are available for average time to authorize non-VA services.

Not all Veterans qualify for VA health care, and of those who do, only 37% are enrolled. For those not enrolled or who do not qualify, about 1.3 million Veterans and their families do not have insurance and do not use VA care, or about 10%. Forty-one percent of the uninsured have medical needs that are not being addressed, and 34% have put off care because of cost (Robert Wood Johnson Foundation [RWJF], 2012). Uninsured Veterans are more likely to be younger and have more recent service, and have lower socioeconomic status and education levels. This is a concern since those who have served more recently may not be experiencing the full impact of deployments on their physical health, and future significant health needs may go unmet if they remain uninsured. Of the uninsured, about half fall below the Affordable Care Act’s Medicaid
qualification standard of 138% of the federal poverty line. However, actual eligibility is dependent upon the state in which a Veteran resides and whether or not that state expanded Medicaid (RWJF, 2012).

**Transition Planning**

As in civilian populations, certain social variables will impact Veterans’ future health from a disparity standpoint. Transitioning from active duty to civilian Veteran status is a difficult process. Minimal transitional assistance is given to the majority of military members. Those with some level of disability who have volunteered and been accepted to specialized medical units, such as a Warrior Transition Battalion, will receive more comprehensive transition assistance, but only a small proportion of the total fighting force is given this opportunity. Without direction and support, some new Veterans may not plan adequately for jobs, finances, and health care coverage. Military members frequently separate from service with unmanaged and unrealistic expectations. According to Turner (2012), a survey conducted on post-military employment revealed over half of transitioning military members felt unprepared for their transition, and 80% were looking for a certain job rather than accepting any job available to them. Because military skill sets can be difficult to translate to civilian jobs, military members who are transitioning to Veteran status may have difficulty convincing employers to hire them.

Veterans may have unrealistic earning expectations that can lead to poor economic outcomes, including the inability to purchase needed health coverage. Veterans who may be eligible to keep coverage under Tricare must apply for benefits within a short time frame after separation to ensure coverage. Tricare is the current...
medical insurance plan provided to all military members and their families, and some Veterans. Covered Veterans will pay both premiums and copayments under Tricare if coverage is kept after separation. Military members who may assume they will be covered by the VA or Tricare at separation may find that they do not qualify and have not planned for the expense of purchasing Tricare or a more expensive plan through the Marketplace.

**Education.** Education attainment, or lack thereof, has long been associated with health disparities as lower education levels may lead to less earning potential and decreased ability to afford a safe and healthy lifestyle. Between 2000-2009, Veterans were more likely than civilians to have some college, but less likely to have a degree. Female Veterans, however, were more likely to have a degree than their civilian counterparts (Holder, 2014).

**Disability.** Americans with disabilities experience disparities in health status on a variety of indicators, compared to non-disabled Americans, especially evident in activity limitations and mental health (Kansas Department of Health and Environment, n.d.). While the number of Veterans in the population has been decreasing, the number of Veterans with a service-connected disability is rising. Furthermore, the severity of the service-connected disability has increased sharply (National Center for Veterans Analysis and Statistics [NCVAS], 2014). Despite access to VA benefits and compensation for those with service-connected disabilities, younger disabled Veterans between ages 18 and 54 are more likely to experience poverty than disabled non-Veterans in the same age group (NCVAS, 2015b). Veterans without disabilities experience poverty at lower rates than their civilian counterparts, further highlighting the
role of disability in influencing socioeconomic status as a risk factor for poor health. As the number and severity of Veteran disabilities rise, the poverty disparity between Veterans and non-Veterans will continue to widen and the need for more and improved resources will become more challenging. Additionally, since Veterans of the current conflict generally fall within the ages of 18 and 54 and are more likely to experience severe or multiple disabilities with ratings over 70%, a greater cohort of Veterans are at risk for poverty and poorer health outcomes.

**Family and Social Support.** Individuals with stronger social networks and family support are healthier and live longer lives. They have fewer mental health concerns, and engage in healthier behaviors (County Health Rankings and Roadmaps, 2015). Veterans and their families are frequently subjected to extremely stressful situations, such as lengthy deployments, frequent moves, military rules and regulations that may be restrictive, and health problems resulting from combat. Additionally, Veterans and their families have endured the uncertainty of the transition process, an alteration in the how their lives are structured. Divorce frequently occurs in military populations. Veterans are more likely to be married than their civilian counterparts; they are also more likely to be divorced or separated than civilians (NCVAS, 2015a). There is no difference in divorce rates between military members and civilians after controlling for variables such as gender and age (Karney, Laughran, & Pollard, 2012).

The presence of combat-related PTSD, a common negative outcome of war for Veterans, can lead to greater relationship discord and divorce. Veterans with PTSD reported significantly more dissatisfaction with relationships, more family dysfunction, and higher levels of interpersonal violence (Price & Stevens, 2015). Thirty eight percent
of Vietnam Veterans had failed marriages within 6 months of return from war, while Veterans without PTSD reported longer and happier relationships (Price & Stevens, 2015). Veterans of the Gulf War and OIF and OEF conflicts have current PTSD rates between 12% to 14% (Gradus, 2015), representing the potential for ongoing family instability and social isolation and negatively impacting long-term health outcomes.

**Cost Issues**

Although the Veteran population is decreasing, and will continue to decline over the next several decades, VA expenditures continue to rise. Medical care expenditures have risen only slightly, and while medical expenditures are second only to compensation and pension for total VA spending, they decreased slightly from 2000 as a percent of total expenditures (NCVAS, 2010). Past research has shown that VA health care is less costly than comparable civilian care (Congressional Budget Office [CBO], 2014). However, this comparison may not be accurate because of the differences in the populations served and the limited transparency related to expenditures historically provided by the VA (CBO, 2014). A dearth of research exists exploring the cost of VA health care and whether it is sufficient or applied in such a way to address disparities within the Veteran population or the Veteran population compared to civilians.

**Legal and Ethical Considerations**

U.S. Veterans rely heavily upon the VA to provide needed health care services in a competent and timely manner. Many military members enter the military believing that if they should suffer adverse health outcomes stemming from their time on active duty, they will receive the needed care. However, recent reports have indicated that the health and benefit system built specifically for them has been unable to fulfill its promise
of quality and timely care to Veterans. In July 2015, only 3 months before the end of the fiscal year, the VA reported some hospitals will close and services stopped due to funding shortages (Montagna, 2015), leaving thousands of Veterans without health care services for several months. Several independent investigations revealed that the VA system was riddled with mismanagement issues, leading to deaths, delays in care, missed benefits, infectious disease exposures, and uncontrolled construction costs (Montagna, 2015). While these issues are complicated and time consuming, the ethical issue lies in what could be viewed as a breach of contract; Veterans were promised care, but the system is mismanaged such that these promises are difficult to keep.

Another ethical issue occurs when Veterans move to areas where they are able to access needed services via the VA. Centers that suffer from mismanagement and inability to care adequately for their enrolled population may create health issues for the community itself. Veterans may increasingly utilize area emergency services and hospitals when timely and appropriate care would have averted the need for such services. Community services may not have planned for major increases in capacity and may not be able to meet the needs of an influx of patients who should receive care within the VA system.
CHAPTER IV
PROGRAMS TO REDUCE HEALTH DISPARITIES

Military and VA Sponsored Programs

Several military/VA sponsored programs exist to provide health care assistance to Veterans. Many Veterans have access to the VA health care system, which was designed specifically to provide medical care to people who served in the U.S. military. Benefits of this system include the number of specialty care departments and research specific to the unique health outcomes experienced by this population. Civilian health care organizations may not have the depth of understanding of Veteran health needs to answer questions specific to their unique health determinants, such as the long-term health impact of combat-specific exposures.

Other services are available to Veterans that may decrease risk factors for health disparities. Veterans can apply for home loans at lower cost and with a relatively lower credit score in comparison to non-VA lenders, allowing Veterans to afford safer and healthier housing. Military members are also eligible for a variety of education assistance programs through the government to cover the costs of education. A notable benefit of these programs is the ability of Veterans to pass the benefit to a spouse or children, should Veterans choose not to use it themselves, enabling Veterans and their families to achieve higher levels of education and improve earning potential. A number of other services are available that may positively impact a Veteran’s ability to improve his or her life and avoid some of the disparities that exist. A comprehensive list is available through the Veterans Affairs website (Table 4.1).
<table>
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<tr>
<th>MAJOR VA SERVICES</th>
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<tr>
<td>▪ Health care benefits</td>
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<td>▪ Vocational rehabilitation &amp; employment</td>
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<td>▪ Home loans</td>
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<td>▪ Life insurance</td>
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<td>▪ Cemetery services</td>
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**Source:** Adapted from the Department of Veteran Affairs (2013b)
While hundreds of government programs exist to assist Veterans in a number of ways, they are subject to a highly bureaucratic and often-mismanaged system. In addition, a large number of programs are available but Veterans are often unaware of what is available to them due to a lack of communication.

State or local public health services that may exist to serve Veterans remains a topic to be explored. The VA health care administration operates a public health section, which conducts ongoing epidemiologic studies. However, local public health departments do not typically separate out Veterans from the rest of the population. If Veterans are discussed during a community health assessment or targeted for interventions, this information is not readily apparent. Community research conducted outside the VA system to explore health disparities and issues relevant and specific to Veterans is not readily available, outside of PTSD and mental health.

Civilian-Sponsored Programs

Assisting Veterans to live better lives is a highly popular civilian concept, as evidenced by the hundreds, if not thousands, of non-profit organizations in the U.S. that provide some level of service to Veterans. Depending on the size and resources available within these organizations, Veterans who are experiencing disparities on a variety of levels may be assisted. For instance, the Wounded Warrior Project, a growing national non-profit organization focused on empowering wounded warriors as they transition to Veteran status, will have served over 100,000 active duty and Veterans by 2017, raising over $96 million to provide a variety of services to those wounded. Additionally, the program provides grants to other Veteran-serving civilian organizations (Wounded Warrior Project, 2015). The growth and presence of such programs is vital to
ensuring Veterans who are without VA benefits or have difficulty accessing these services have another avenue to meet their health needs, thus decreasing their risk of health disparities. Additionally, organizations such as the Wounded Warrior Project interface directly with the military to ensure referrals are made to their programs.

Civilian programs available to Veterans can be a vital adjunct to the government benefits to which they are entitled. However, depending on where Veterans reside and the presence of such organizations in proximity to where they live, these organizations may not be able to evenly address those in need. Operation of a civilian organization in rural areas, where many Veterans reside, may be difficult much the same as ensuring VA care is available to these individuals. Smaller non-profits may have valuable services to provide, but may also find accessing military populations difficult. Finally, due to the overwhelming number of such organizations, finding which ones are viable opportunities for Veterans may be difficult.
A great deal of attention is on the Veteran community given the ongoing conflicts in the Middle East and the poor care afforded to Veterans upon their transition to civilian life. Veterans suffer health disparities at greater rates than their civilian counterparts. Despite the promise of resources to ensure Veterans’ health needs are met, they continue to report poor health outcomes. Consideration of Veteran status as a determinant of health is necessary to ensure that government and community services are adequate to provide for disease prevention and the future health needs of Veterans. Several courses of action are recommended toward this goal.

Research

The military and VA systems conduct a great deal of epidemiological research. The Office of Research and Development oversees research at 115 VA facilities on a wide variety of subjects (DVA, Office of Research and Development, 2015), including research on health disparities and minority health. The focus of many of these studies includes disparities that occur within the Veteran population, such as gender, age, and ethnicity. One study focused on comparing disparities within the VA system to disparities in the non-VA system (DVA, Office of Research and Development, 2015). This represents a positive step to understanding the health disparities of Veterans within the context of the wider community. The Veteran population as a whole should be considered a health disparity group as well. While a great deal of epidemiological research is being conducted on combat exposures, the military system should invest in

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research exploring other root causes of disparities, such as whether the military fosters a failure of integration of health behaviors like daily physical training, past separation from the military, and the subsequent high rates of overweight and obesity.

The public health profession is invested in exploring and decreasing health disparities in the population. Those who have served in the military should be considered a population at high risk for disparities and thus be a focus for public health research. In addition, strategies to decrease these disparities among the Veteran population need to be explored. When possible, community assessment activities should consider Veterans as a disparity population to assess for adequacy of services and population needs, especially in communities where high numbers of Veterans reside. While Veterans would be included as part of the whole population, segmenting them for further research would allow for more robust understanding and development of services to decrease disparities. When possible, such assessment should include collaboration of military and VA partners to better integrate the delivery of needed services developed based on research or assessment findings.

Community-Based Participatory Research (CBPR) is a form of research that directly involves and benefits the community studied. It provides a way for a group of people to have a voice in describing their own experiences and health needs, leading to more targeted population-based intervention (Agency for Healthcare Research and Quality [AHRQ], 2003). The Veteran population could directly benefit from CBPR. Understanding how Veterans experience health care, how disability influences their health behaviors, social networks and relationships, and what factors they feel are necessary or missing in their care are potential topics for further research. Qualitative
research methods such as focus groups or Photovoice may help communities better understand the nuanced factors leading to disparities in the Veteran population and assist them to identify how to solve them.

Policy

Veterans need to be well-positioned to live equitably healthy lives. The military and VA systems should consider policy actions that will enable access to care regardless of whether or not a Veteran qualifies for VA benefits, and should seek to eliminate gross mismanagement and fiscal waste while directing resources to where they are most needed. Policies to help eliminate the health disparities between Veterans and civilians should begin at the initiation of military service, with a focus on instilling healthy behaviors and attitudes. Policies should also focus on providing the means necessary to facilitate injury and exposure prevention during peace and conflict. Given the young age of many military members at accession, early efforts to build lifelong health would not only help ensure a healthier fighting military force, but also facilitate lower rates of disease in later years. Early interventions also have the added benefit of saving millions, if not billions, of government dollars in health care expenditures.

Public health policy, especially in collaboration with both government and non-governmental Veteran service organizations, could have a stronger emphasis on assessment of Veteran populations within the community and assurance of health care provision. While Veterans could, theoretically, access public health services much as civilians can, their special circumstances and specific concerns may be better addressed with a military approach. For instance, a group of Veterans in a community
with high rates of obesity might benefit from community-based wellness services that take into account the previous physical training requirements and adaptive exercise needs to which this population might respond. However, unless public health emphasizes a focus on the Veteran population and their health disparities, policies allocating resources to programs and services for Veterans are unlikely, when public health funding is already spread thin.

Programs

Numerous programs exist to assist Veterans who face a variety of risk factors for poor health. There are so many that identification of which programs Veterans could qualify for may be overwhelming. However, the VA and military employ liaisons and other access points through which military members and Veterans can work to ensure they able to identify the best mix of support. Currently, transition services are robustly available for wounded and ill Army soldiers who are accepted to a WTU, but this is not available to all soldiers, nor is it to other military branches. While the scope of medical services available in a WTU may not be necessary for otherwise healthy military members, the career and life planning services available would be beneficial across military settings. Initiating comprehensive transitional services for military members at least 6-12 months prior to separation may ameliorate the stress, finance, career, and health care barriers this transitional time can create.

Non-military or VA programs provided by non-profit organizations in communities are also common. Community-based research would ensure that these organizations are adequately providing programs that best target the needs of Veterans in specific communities. Ensuring that Veterans can easily identify and access available programs
should be pursued. Public health as a profession may also consider providing education, support, and service-oriented programs for those Veterans for whom VA benefits are not provided and for whom purchasing health care is difficult or impossible.

Military Veterans in the U.S. face unique and challenging risk factors for poor health outcomes over time based on their volunteered service to uphold and defend their Country. Despite hundreds of services and access to one of the largest integrated health systems in the country, Veterans have become a health disparity population, inequitably experiencing many risk factors for poor health. Addressing their disparities and ensuring every avenue to health should be a priority for all.
REFERENCES


