



## RESEARCH BRIEF

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# Aging and Life Expectancy in Homeless Veterans: Nine Questions

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## Introduction

Homelessness has long been a public health issue in the U.S. Veteran population. A review of community surveys of Veteran homelessness conducted in 2014<sup>1</sup> showed that Veterans have been overrepresented in homeless populations since the 1980s. This finding was extended in 2016, when a national survey of homelessness<sup>2</sup> showed that Veterans comprised 9.2% of all homeless adults, in contrast to 6.9% of the total U.S. population.

A valuable perspective on homelessness<sup>3</sup> proposes that causes and consequences could best be understood by taking into consideration structural factors and individual limitations. From a structural viewpoint, inadequate inventories of affordable housing, limited access to mental health services for the seriously mentally ill, high unemployment rates, and economic crises unquestionably contribute to homelessness. However, while these factors create the potential for homelessness, who becomes homeless is not determined randomly. Vulnerability to homelessness based on individual limitations is an equally important determinant of homelessness. These individual limitations include childhood trauma, poverty, low educational achievement, health conditions, combat stress, psychiatric disorders, and substance abuse. An important element in understanding health outcomes for homeless Veterans is that vulnerability factors for homelessness are also potent factors for accelerated aging and early death. Chronological age is the primary risk factor for debilitating chronic disorders such as heart disease. Vulnerability factors associated with homelessness can increase the impact of chronological aging on chronic diseases and subsequently reduce lifespan. In this brief we address nine questions focusing on these two related issues, aging and life expectancy.

## Nine Questions

### 1. HOW MANY VETERANS EXPERIENCE HOMELESSNESS?

In a 2016 national survey of homelessness,<sup>2</sup> Veterans comprised 9.2% of all homeless adults, in comparison with only 6.9% of the total U.S. population. The survey's calculations estimate that 39,471 Veterans were experiencing homelessness on a single night, with 26,404 in sheltered (temporary emergency or transitional housing) sites and 13,067 in unsheltered locations. According to the same study, over the course of 2016, roughly 125,000 Veterans spent at least one night in an emergency shelter or transitional housing program. Detailed estimates revealed that homeless Veterans are predominantly male (91.1%) and the small majority are non-Hispanic Whites (52.0%). African American Veterans are especially overrepresented, accounting for about 32.9% of the population of Veterans experiencing homelessness, as compared to only 11.6% of the overall Veteran population.

## 2. ARE OLDER VETERANS AT AN INCREASED RISK OF HOMELESSNESS RELATIVE TO THEIR NON-VETERAN COUNTERPARTS?

If we use the Social Security early retirement age of 62 as a threshold, then older Veterans appear to constitute only a minority of the population of homeless Veterans. According to the most recent available data,<sup>2</sup> Veterans aged 62 and above accounted for 16.2% (or roughly 20,000 Veterans) of all Veterans who were homeless at some point during 2016. By contrast, Veterans aged 62 and above accounted for 54.8% of the overall Veteran population in the United States in 2015, suggesting that Veterans in this age bracket are grossly underrepresented among the population of homeless Veterans.

However, studies have shown that homeless individuals aged 50 and above experience geriatric conditions at rates that are equivalent to those in the general population who are 20 years older.<sup>4,5</sup> From the standpoint of discussing health needs and life expectancy, we have therefore applied a threshold of 50 or 55 for identifying “older” Veterans experiencing homelessness. Using a lower age cutoff results in a somewhat different understanding of the scope of homelessness among older Veterans. According to the most recent survey data,<sup>2</sup> Veterans aged 51 and above accounted for 59% of all Veterans who used emergency shelter in 2016 (roughly 74,000 Veterans). Moreover, Veterans in the 51-61 age bracket appear to be highly overrepresented in the homeless Veteran population; they accounted for 43% of Veterans who used shelter in 2016 (roughly 54,600 Veterans), but only 18% of the overall U.S. Veteran population.

## 3. WHAT ARE THE AGE TRENDS FOR HOMELESS VETERANS?

Regardless of which age threshold is used to define “older,” a notable fact to emerge from national data is that the homeless Veteran population is aging. Older Veterans comprise an increasing share of homeless Veterans: in 2009, those aged 51 and above comprised about 47% of all Veterans who used emergency shelter over the course of a year. However, by 2016 Veterans aged 51 and above comprised nearly 3 out of every 5 Veterans (59.1%) using emergency shelters.

This trend means that the overall number of Veterans experiencing homelessness appears to have gone down substantially since 2009, but the number of older homeless Veterans has actually increased. The number of Veterans aged 62 and above in the general population declined by about 5% from 10.9 million to 10.4 million between 2009 and 2015; the number of Veterans aged 62 and above using shelter on an annual basis increased by 47% from roughly 13,000 to roughly 19,000.

Based on overall Veteran population and age demographics, combined with survey data on the number of homeless Veterans, we have estimated the future trends of homelessness in the older Veteran population. Our calculations suggest an increase between 2010 and 2020 in the number of Veterans aged 60 and above experiencing homelessness, with the number of older homeless Veterans expected to increase by 14% overall—from 24,100 to 27,524—between 2010 and 2020. However, our estimates also suggest a substantial decline between 2020 and 2025 in the number of older Veterans who are expected to use an emergency shelter at some time over the course of a year. This decline is likely due to members of the post-Vietnam cohort who have been overrepresented in the Veteran homeless population for several decades. These Veterans will increasingly end homeless status through death, entering nursing homes, aging into eligibility for Social Security retirement, and other programs that allow them to access more stable housing.

#### 4. ARE OLDER HOMELESS VETERANS AT INCREASED RISK FOR EARLY DEATH?

Research findings from numerous countries are consistent in showing increased risk for early death in the general homeless populations. Veterans are unique, however, in several respects that might influence lifespan in both positive and negative ways. Selection criteria eliminate those whose health and mental fitness failed to meet fairly rigorous standards. Military service provides health care and physical conditioning. Veteran status provides access to education, health, and housing benefits. These factors suggested that Veterans are healthier at early ages and more likely to enjoy benefits that are associated with good health and longevity. Physical and psychological trauma experienced during military service, family disruption, absence from the workforce, and exposure to unhealthy lifestyle behaviors (smoking, drinking) are common factors cited as potential contributors to increased risk for early death.

In order to determine if homelessness per se influences lifespan in Veterans, we conducted a study<sup>6</sup> of 4,475 Veterans who were admitted into VA homelessness programs in 2000–2003 and a separate sample of 20,071 age-matched Veterans with no history of homelessness. We searched records from the Centers for Disease Control National Death Index file for the years 2000-2011 to determine survival status, date of death, and cause of death. During the follow-up period, 35% (1,560 of the 4,475) of the homeless Veterans died from all causes, compared with a significantly smaller proportion (3,649 of 20,071, 18%) of the Veterans with no history of homelessness. Veterans in the homeless sample were significantly younger at time of death (65.0 years of age) compared with the non-homeless sample (66.9 years of age). To examine the effect of age on survival in more detail, we examined life expectancy in old (ages 55–59) and older (ages ≥60) groups. Survival rates were lowest in the older homeless Veterans (58%) and highest in the old non-homeless Veterans. These results argue strongly that homelessness has an impact on older Veteran risk for early death.

#### 5. DO OLDER HOMELESS VETERANS DIE OF DIFFERENT CAUSES THAN OTHER VETERANS?

In the study described in the answer to Question 4, almost all deaths (95% of the homeless sample; 94% of the non-homeless sample) were due to the same 11 causes. For both groups, the most frequent causes were cardiovascular disease, cancers, and respiratory diseases. The differences between the homeless and non-homeless groups in terms of proportions of death was minimally different for other causes of death. Although homelessness is a risk factor for early death in Veterans, it does not appear to achieve that impact through an effect on specific causes of death, but rather earlier death from common causes.

#### 6. ARE YOUNGER HOMELESS VETERANS AT INCREASED RISK FOR EARLY DEATH?

We used the same methods from our study of older homeless Veterans to examine early lifespan in 23,898 younger Veterans, ages 30 to 54, who were admitted to VHA homeless programs in in 2000-2003.<sup>7</sup> For comparison purposes, we also identified a separate sample of 65,198 age-matched Veterans with no history of homelessness. Again, we searched records from the Centers for Disease Control National Death Index file for the years 2000-2011 to determine survival status, date of death, and cause of death. During the follow-up period, 16.3% homeless Veterans died; a substantially smaller proportion of the non-homeless Veterans died (6.4%). Using national death statistics, we estimate that 6.8% of men of similar age die over a time period equivalent to that used in the study follow-up period. Early death in the homeless Veterans, therefore, was not only greater than that of non-homeless Veterans, but was also more than twice what would be expected on the basis of national death estimates.

## 7. WHAT ARE THE CAUSES OF DEATH IN YOUNGER HOMELESS VETERANS?

We found that only five causes comprised the cause of death for the large majority of deaths in both groups: 76% in the homeless Veterans and 83% for the non-homeless Veterans. For both groups, the most frequent categories of cause of death were cardiovascular diseases, cancers, external causes, infection and parasitic disease, and disorders of the digestive system. A notable finding from the study was that only a single category of cause of death, death due to external causes, was associated with a significant and meaningful proportional increase in early death in homeless Veterans in comparison to non-homeless Veterans. Almost a quarter of homeless deaths were due to external causes that include drug overdose, suicide, homicide, and both vehicle and non-vehicle (e.g., falls, drowning, errors in operating machinery) accidents. While the large majority of these deaths were due to drug overdose, suicide, and homicide, a notable proportion was attributable to vehicle and especially non-vehicle accidents. One possible explanation for this specific increased early death rate may be the documented high rate of alcohol and drug use in homeless Veterans and the fact that episodes of intoxication are associated with death by external causes due to accident.<sup>8,9</sup>

## 8. DO HOMELESS VETERANS DIE FROM SUICIDE MORE OFTEN THAN OTHER VETERANS?

Our studies of cause of death and risk of early death in homeless Veterans have shown that, in comparison to Veterans without a history of homelessness, homelessness is associated with an increased rate of death by suicide. The frequency of suicide in younger homeless Veterans is 2.5 times that of Veterans with no history of homelessness. In older Veterans, the frequency of death by suicide is twice that of Veterans with no history of homelessness. These data are consistent with a previous report<sup>10</sup> that found that the suicide rate among Veterans with homelessness in the past year was 81.0 per 100,000 as compared to Veterans without recent history of homelessness with a rate of 35.8 suicides per 100,000.

## 9. WHY DO HOMELESS VETERANS DIE AT EARLIER AGES THAN OTHER VETERANS?

With the exception of death due to external causes in younger homeless Veterans, the causes of death are the same diseases and disorders for both homeless and non-homeless Veterans. Recent research has shown that chronic homelessness and number of homeless episodes in and of themselves are not risk factors for early death in older homeless Veterans. These findings suggest that 1) vulnerability factors common to homelessness and biological aging, and not homelessness *per se*, contribute to risk of early death and 2) accelerated biological aging is the mechanism by which the same set of diseases and disorders produce earlier death in homeless Veterans. The mechanisms of biological aging are likely diminished repair and regeneration in widespread organ systems. With these conditions, common diseases and disorders have enhanced impact on overall health. Support for this interpretation can be found in recent studies<sup>5,11</sup> of geriatric conditions (e.g., falls, cognitive impairment, frailty, sensory impairment, urinary incontinence) in homeless adults age 50 and older. The prevalence of these conditions was found to be higher than that seen in housed adults 20 years older and was associated with vulnerability factors common to homelessness and biological aging—limited education, medical comorbidities, and alcohol and drug use problems.

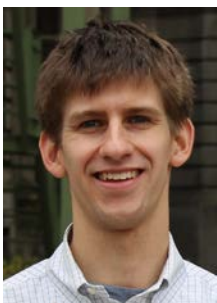
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