

## Changes in Overall and Firearm Veteran Suicide Rates by Gender, 2001-2010

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### ABSTRACT

“To date, the majority of information on veteran suicide rates has been based on the population of veterans utilizing Veterans Health Administration (VHA) services. From 2001 to 2010, both male and female VHA veterans had higher age-adjusted suicide rates than men and women in the U.S. general population. *Methods:* Using the Department of Veterans Affairs (VA) maintained database of suicide mortality information, this study aimed to provide novel information on overall and firearm-specific suicide rates among the broad veteran population, which includes both veterans who do and do not utilize VHA services. Suicide rates were computed and compared over time from 2001 to 2010. *Results:* Of the 39,408 veteran suicides included in this study, 94% were among men and 6% were among women. Age-adjusted veteran suicide rates increased significantly from 2001-2002 to 2009-2010 for both men and women. *Conclusions:* Consistent with gender differences in rates of suicide in the larger U.S. general population, rates of suicide were higher among male veterans when compared to rates of suicide among female veterans. However, a larger increase was observed for female veterans during the study period. Overall, firearms were the most commonly used mechanism for suicide among veterans, accounting for 67% of all veteran suicides; 69% of male veteran suicides, and 40% of female veteran suicides. This

study identified evidence of gender differences in rates and trends in suicide involving firearms. Larger increases in overall and firearm-specific suicide rates were identified for female veterans. Furthermore, the rates of firearm suicide increased disproportionately to the overall suicide rate increase among female veterans from 2001 to 2010. By contrast, the observed increase in firearm suicide rates among male veterans was consistent with overall suicide rate changes for men. The disproportionate increase in firearm suicide rates among female veterans may signal an important change in method preference among members of this group.”

### RESEARCH HIGHLIGHTS

- There is a lack of published information on mechanism-specific suicide rates and trends in these rates over time. This study aims to provide novel information on overall and firearm-specific suicide rates among the broad veteran population, which includes both veterans who do and do not utilize VHA services.
- Using a VA maintained database of suicide mortality information compiled from death certificate records from 23 states for 2001 to 2010, the researchers found that age-adjusted suicide rates increased significantly from 2001-2002 to 2009-2010 for both men and women.
- Though the rates of suicide were higher among male veterans when compared to rates of suicide among female veterans, a larger increase was observed for female veterans during the study period. The rate of suicide among men increased by 15% between the years 2001 and 2010, while the rate of suicide among women increased by 35% during the same time period.
- Firearms were the most commonly used mechanism for suicide among veterans, accounting for 67% of all veteran suicides; 69% of male veteran suicides, and 40% of female veteran suicides. The percentage of suicides involving a firearm among men remained stable during the project period, while the percentage of suicides involving a firearm among female veterans increased from 24% in 2001-2002 to 45% in 2009-2010.

## IMPLICATIONS

### FOR PRACTICE

Veterans having thoughts of suicide should utilize services available to them, including the 24/7 Veterans Crisis Line and other suicide hotline services. While studies, overall, show a decline in the rate of suicide among veterans who use VHA services, this study shows that the overall rate of suicide among veterans who use and do not use VHA services increased from 2001 to 2010. Given this finding, there is a compelling need to identify veterans at risk for suicide who do not currently use VHA services. Medical providers should regularly evaluate their veterans, especially those not being seen at the VHA, for signs of suicide ideation (also known as suicidal thoughts) and engage veterans at-risk for suicide in appropriate treatment and care. Additionally, and in line with this studies findings, medical providers should inform their patients of mental health services available to them, including counseling, practitioners should continue providing information on suicide prevention to veterans' families and friends, and family members and friends of veterans should remain informed on best ways to help their veteran post-transition.

### FOR POLICY

The declining rates of suicide among veterans who use VHA services indicates that the current VHA suicide prevention initiatives are making an impact. The VHA might continue its current suicide prevention program implemented in 2004 that increased mental health staff, created the Veterans Crisis Line, etc. The VA might continue conducting research on suicide prevention among veterans, especially veterans who do not utilize VHA services. Additionally, given the increase in suicides committed and attempted by women veterans, the VHA might offer additional mental health and social support services to women veterans. The VA and policymakers might continue efforts to ensure veterans not utilizing VHA services are able to receive appropriate and necessary health care services. Policymakers might allocate funds for research on best practices for suicide prevention for post 9/11 veterans, and might also continue allocating funds to suicide prevention programs and services for veterans and their family members.

### FOR FUTURE RESEARCH

Given the study findings, more research is needed to better understand why female veterans are increasingly selecting firearms as a mechanism for suicide and develop tailored suicide prevention interventions for this growing veteran subpopulation. A limitation of this study is that the dataset only included the veteran suicides in 23 states. Although geographically diverse, it is possible that these results may not be generalizable to the U.S. veteran population. Thus, it might be beneficial to replicate this study using death certificate records from all 50 states and U.S. territories. More research is needed on suicide ideation by age. Future studies should use datasets that includes older veterans who do not use VHA services.

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