VA NATIONAL CENTER ON HOMELESSNESS AMONG VETERANS
Research-driven solutions to prevent and end homelessness

RESEARCH BRIEF

January 2020

Understanding Risk for Suicidality Among Veterans Who Experience Housing Instability

John R. Blosnich, PhD, Ann Elizabeth Montgomery, PhD, & Melissa Dichter, PhD



Funding: *National Center on Homelessness among Veterans (PI: Blosnich); VA Health Services Research & Development (IIR-13-334; PI: Montgomery); VA Health Services Research & Development Career Development Award (CDA-14-408; PI: Blosnich). The views expressed here do not necessarily represent those of the Department of Veterans Affairs or the United States Government.*

What do we know?

After adjusting for age, Veterans are twice as likely as non-Veterans to die by suicide.[1] Suicide prevention is the top clinical priority of the Veterans Health Administration (VHA). Housing instability is a major correlate of suicide risk, and unstably housed Veterans have more than double the rate of suicide compared with stably housed Veterans (81.0 versus 35.5 suicides per 100,000 Veterans).[2] In addition, 29% of Veterans receiving treatment for suicidality had evidence of housing instability.[3] However, it is unclear whether use of VHA Homeless Programs impacts subsequent suicide risk for Veterans experiencing housing instability.

New information provided by the study

We used data from over 5.8 million Veterans who were screened for housing instability during VHA outpatient visits between October 1, 2012 through September 30, 2016. Veterans were categorized as either ever homeless, being at-risk for homelessness but not homeless (only at-risk), or neither homeless nor at-risk for homelessness. Using cause and date of death information from the VA's Mortality Data Repository, we found that suicide was the 5th leading cause of death for Veterans who were ever homeless, whereas suicide was the 10th leading cause of death for Veterans who were neither homeless nor at-risk for homelessness. Suicide was the 6th leading cause of death for Veterans who were at-risk for homelessness.

Compared to Veterans who were not homeless or at-risk for homelessness, Veterans who were ever homeless or at-risk for homelessness had significantly greater hazard of death (Table 1). For example, Veterans who were ever homeless had a 75% greater hazard of death by suicide compared to Veterans who were neither homeless nor at-risk for homelessness.

Table 1. Adjusted hazard ratios of all-cause and selected cause-specific death comparing Veterans who were ever homeless or at-risk of homelessness to Veterans who were neither homeless nor at-risk for homelessness		
	Ever Homeless	Only At-risk
	aHR (95%CI)	aHR (95%CI)
All-cause	1.69* (1.64-1.74)	1.48* (1.44-1.53)
Cause-specific		
Accidents (unintentional injury)	3.13* (2.87-3.40)	1.92* (1.73-2.14)
Intentional self-harm (suicide)	1.75* (1.48-2.06)	1.80* (1.53-2.11)
Homicide	3.01* (2.25-4.03)	2.65* (1.93-3.65)
Note: *=p<.05; all models adjusted for age, sex, race, ethnicity, military sexual trauma, diagnosed medical conditions, and service-connected disability status; aHR=adjusted hazard ratio		

Using International Classification of Disease (ICD) codes for suicidal ideation or suicide attempt found in Veterans' medical records, along with data about suicidal ideation and attempt from the VA's Suicide Prevention Applications Network database, we compared the three Veteran groups on suicidal ideation and suicide attempt. Compared to Veterans who were neither homeless nor at-risk for homelessness, Veterans who were ever homeless or at-risk for homelessness had significantly greater odds of suicidal ideation and attempt (Table 2).

Table 2. Prevalence and adjusted odds of suicide morbidity among Veterans, by housing status				
	Suicidal Ideation		Suicide Attempt	
	n (%)	aOR[1] (95%CI)	n (%)	aOR[1] (95%CI)
Neither Homeless/ At-risk	46,272 (0.81)	Ref	42,535 (0.75)	Ref
Ever Homeless	5,326 (6.17)	3.12* (3.01-3.22)	4,625 (5.36)	2.69* (2.59-2.79)
Only At-risk	2,847 (3.43)	2.24* (2.15-2.33)	2,597 (3.13)	2.10* (2.01-2.20)
1=Adjusted for age, sex, race, ethnicity, military sexual trauma, depression, psychosis, PTSD, schizophrenia, alcohol use disorder, substance use disorder, traumatic brain injury, and service-connected disability status; *=*p*<.05; aOR=adjusted odds ratio				

Among the Veterans who ever screened positive for homelessness or at-risk for homelessness (n=169,221), we examined records of whether they accessed VHA Homeless Programs. About 55% of Veterans with a positive housing instability screen had used one or more VHA Homeless Programs during the observation period.

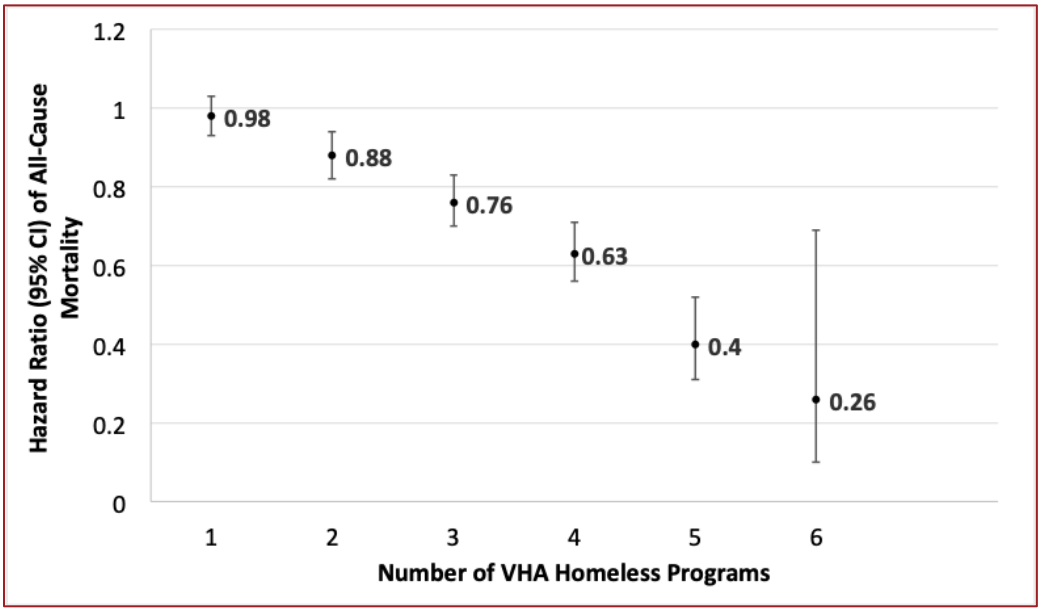
Among Veterans with a positive housing instability screen, we compared Veterans who did versus did not use VHA Homeless Programs. In these comparisons, we accounted for age, sex, race, ethnicity, experience of military sexual trauma, diagnosed medical conditions, and service-connected disability status.

Compared to Veterans with a positive housing instability screen who did NOT use VHA Homeless Programs, Veterans who used *at least one* VHA Homeless Program had:

- 13% reduced hazard of death from any cause (adjusted hazard ratio [aHR] = 0.87, 95%CI=0.83-0.91).
- 20% reduced hazard of death from suicide (aHR=0.80, 95%CI=0.63-1.01; *p*=.064)

We noted a dose-response-like association showing that a greater utilization of VHA Homeless Programs was associated with lower hazard of death from any cause (Figure 1), even after accounting for age, sex, race, ethnicity, ever experienced military sexual trauma, diagnosed medical conditions, and service-connected disability status.

Figure 1. Hazard of Death from Any Cause among Veterans Who Screened Positive for Housing Instability, October 1, 2012 – September 30, 2016

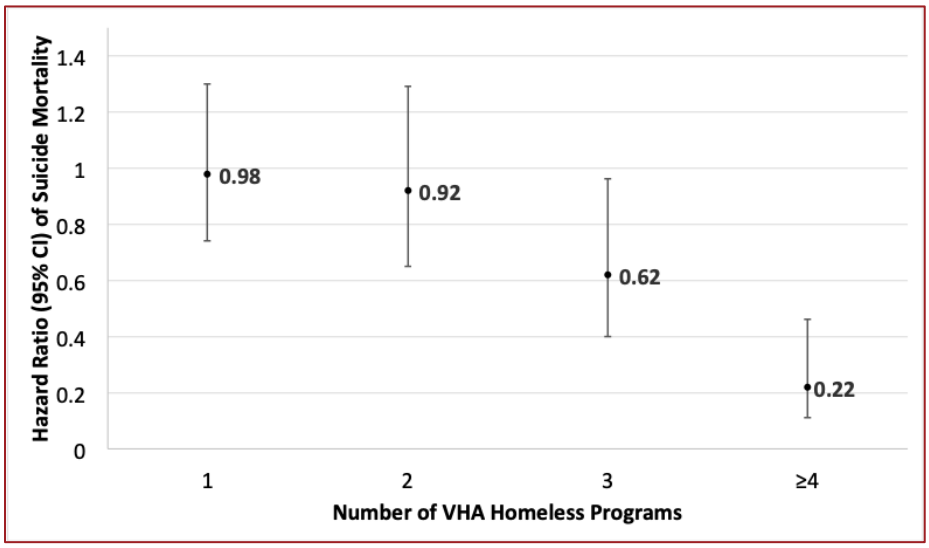


We noted a similar dose-response-like association showing that greater utilization of VHA Homeless Programs used was associated with reduced hazard of death from suicide (Figure 2), even after accounting for age, sex, race, ethnicity, military sexual trauma experience, previous suicidal ideation or attempt, ever being diagnosed with depression, and service-connected disability status.

Limitations

Data about cause of death among persons experiencing homelessness may be prone to misclassification due to limited next-of-kin contacts or witnesses to the death. Utilization of VHA Homeless Programs may indicate that Veterans are also receiving VHA health care more generally. Future studies should investigate receipt of specific health care (e.g., treatment for addiction) and how types or frequency of health care may interact with VHA Homeless Program utilization to decrease a patient's risk of suicide.

Figure 2. Hazard of Death from Suicide among Veterans Who Screened Positive for Housing Instability, October 1, 2012 – September 30, 2016



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Acknowledgements

The authors thank Emily Brignone, PhD for her assistance in conceptualizing this study and Meagan Cusack, MS and John Cashy, PhD for their assistance in data management.