Testimony of

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Good morning Mr. Chairman and distinguished members of the Special Committee on Aging. My name is Mark S. Kaplan and I am a professor of community health at Portland State University. Thank you for the invitation to testify before this Committee on this critical public health issue affecting the aging veteran population. I applaud the Committee for embracing the critical issue of veterans' mental health and particularly the emphasis on suicide risk and prevention. As an active suicide researcher since 1992, I have focused on population-wide data to understand suicide risk factors among senior populations. the National Institute of Mental Health, the National Institute on Aging, and private foundations have supported my research.

As you know Mr. Chairman, suicide remains a serious public health problem and reducing suicide is a national imperative. To the best of our knowledge, more than 30,000 people take their lives every year (the real number is probably higher, some experts think as high as 100,000); and nearly 650,000 people are seen in emergency departments after they attempted suicide, according to the Institute of Medicine. Suicide is now the 11th leading cause of death (8$^{th}$ leading cause of death for males). Suicide disproportionately affects those aged 65 years and older (i.e., 12 percent of the population is over 65, but 18 percent of suicides are over 65). Four times as many men as women complete suicide; among older adults the proportion of men may be as high as 90 percent. Equally important, more people kill themselves (11.1 per 100,000) than are killed by others (5.9 per 100,000). In Oregon, suicide accounted for nearly 74 percent of violent deaths in 2005, according to the Oregon Violent Death Reporting System. Two-thirds of the individuals who completed suicide visited with a physician in the month preceding their death. Firearms are the most common method for completing

suicide among men and women (including those aged 65 and older) in the United States. Veterans are another important group that is particularly vulnerable to suicide compared to their civilian counterparts. In my testimony today, I will review our research on veteran suicide and end with some recommendations for the committee.

A recent editorial in The Oregonian newspaper asked: "What is it about these veterans among us that makes them twice as likely to take their lives?" According to state data for 2000-05, the age adjusted suicide rate among male veterans was 46.05 per 100,000 and for nonveteran males the rate was 22.09 per 100,000—meaning that veterans in Oregon were more than twice as likely to die by suicide than nonveterans. Veterans tend to have more disabilities that limit their ability to function, which can make them more isolated and depressed. Oregon veteran suicide decedents are more likely to use firearms. The story is similar at the national level.

The research literature shows that suicide risk factors common in Department of Veterans Affairs (VA) patients include gender (male), race (white), older age, diminished social support, substance dependence, homelessness, family history of suicide, combat-related trauma, medical and other psychiatric conditions (depression and post-traumatic stress disorder, in particular), marital disruption, gambling problems, lower military rank, prior attempts, and availability and knowledge of firearms. Although many of these studies provide important epidemiologic evidence regarding the circumstances and risk factors associated with suicidal behavior, the reliance on data obtained from VA clinical samples is particularly limiting.

According to the 2001 National Survey of Veterans, three out of every four veterans do not receive health care through VA facilities. Consequently, little is known

about suicide risk factors among veterans outside the VA system. Estimates of suicide risk may be inaccurate because the characteristics of veterans who use the VA system differ from those of the larger population of veterans. In light of the high incidence of physical and mental disabilities among veterans of Iraq and Afghanistan, it is important to examine the risk of suicide among veterans in the general population (i.e., VA users and non-users).

Our recent study published in the *Journal of Epidemiology & Community Health* (see Attachment 1) of more than 320,000 men nationwide showed that veterans are twice as likely as their civilian counterparts to complete suicide. The study was conducted in such a way that potential confounding variables were statistically controlled, leading to findings that are presented as objectively as possible. The purpose of the study was to examine the risk factors for suicide in the general population. In pursuing this goal, we used a large, nationally representative, prospective data set (653 deaths from suicide during the follow-up period) to: (1) assess the relative risk of suicide for male veterans in the general population, (2) compare male veteran suicide decedents with those who died of natural and external causes, and (3) examine the effects of baseline sociodemographic characteristics and health status on the subsequent risk of suicide.

My colleagues and I found that veterans made up 16% of the sample and comprised 31% of the suicides (according to the Oregon Violent Death Reporting System, of 543 suicide decedents in Oregon in 2005, 153, or 28 percent, were veterans). Our findings showed that over time veterans were twice as likely (Relative Risk = 2.13, $p < .05$) to die of suicide compared to male nonveterans in the general

population. The story is similar in Oregon where male veterans were more than twice as likely to kill themselves as males who never served in the military, according to the Oregon Department of Human Services. Following other studies, we also found that the risk of death from "natural" causes (diseases) and the risk of death from "external" causes (accidents and homicides) did not differ between the veterans and the non-veterans after adjusting for potential confounding factors.

Our results showed that disabilities that limit functioning are an important suicide risk factor among veterans compared to nonveterans in the general population. Health care providers are well positioned to intervene with at-risk veteran patients who have physical and/or mental disabilities. Primary care physicians, as gatekeepers and the de facto mental health care system, along with other specialists, have important roles to play in the assessment and management of depression and suicidality among veterans in clinical settings.

Another important characteristic of suicidal behavior among veterans is the higher probability that they use firearms as a primary mode of suicide. Our recent analysis of 2003-05 National Violent Death Reporting System (NVDRS) data reveals (see Attachment 2) that the proportion of suicides involving firearms was significantly higher among veterans than nonveterans (71.5 percent vs. 55.7 percent, $p < .01$). Equally important, female veteran suicide decedents were also significantly more likely than their non-veteran peers to use guns (48.6 percent vs. 32.9 percent, $p < .01$). Further analysis of the NVDRS shows that male and female veteran suicide decedents are, respectively, 47 and 76 percent more likely than their non-veteran counterparts to use firearms. Older male and female veterans were also significantly more likely than

younger veterans to use firearms. Data from the National Mortality Followback Survey (NMFS) also showed that veteran suicide decedents were 58 percent more likely than nonveterans to use firearms versus other suicide methods, after controlling for sex, age, marital status, race, education, region, metropolitan status, psychiatric visit in the last year of life, number of half-days in bed for illness or injury in the last year of life, and alcohol use. Furthermore, an analysis of veteran suicide decedents in the NMFS revealed that those who owned guns were 21.1 times more likely to use firearms than were those who did not own guns after adjusting for sex, age, marital status, race, education, region, and metropolitan status. Other data also show that current and former military personnel are more likely to own and use firearms to complete suicide. According to recent data from the Behavioral Risk Factor Surveillance System, veterans are substantially more likely to own guns than the nonveteran population (46 percent vs. 32 percent).

Although there is an ongoing debate among suicidologists and policymakers about the association between the availability of firearms and risk of suicide, the preponderance of the evidence suggests that a gun in the house, even if unloaded, increases the risk for suicide in adults. For example, case-control studies on the prevalence of guns and suicide risk have shown significant increases in suicide in homes with guns, even when adjustments were made for other factors, such as education, arrests, and drug abuse.

**Overall recommendations**

I would like to conclude my testimony with several recommendations for the Committee.

1. With the projected rise in functional impairments and psychiatric morbidity among

veterans from the conflicts in Afghanistan and Iraq, clinical and community interventions directed toward patients in both VA and non-VA health care facilities will be needed.

2. Congress should direct the Department of Veterans Affairs to provide reimbursement for primary care depression detection and management for veterans unable to be served within the Veterans Affairs system.
3. There is a critical need to collect more comprehensive epidemiological information on the proximal and distal circumstances surrounding suicide morbidity and mortality.
4. The National Violent Death Reporting System, run by the Centers for Disease Control and Prevention, tracks all circumstances surrounding a suicide – for example, whether someone who died by suicide was being treated for depression, had discussed their intention with someone else or was in a difficult life circumstance - so that a complete picture of the suicide is created. Currently, there are only funds to operate this tracking system in 17 states. At least $20 million is required to fully implement and maintain NVDRS in all 50 states; however, Congressional funding has remained flat at about $3.3 million.
5. Firearms are responsible for significant suicide mortality in the older veteran population. Many studies offer case-control and ecological evidence linking availability of firearms to suicide with guns. More research is needed to study the interaction between firearm usage and suicidal behavior in older adulthood. I would like to see a congressional mandate for studies on the role of firearms in suicide. Funding should be increased at the Centers for Disease Control and Prevention and

other federal agencies for research involving this type of firearm violence.

6. Because older veterans are familiar with and have greater access to firearms, health care providers need to be more attentive to the critical role that firearms play in suicidal behavior among veterans. Many doctors find it difficult to ask patients directly about suicide. My colleagues and I found that only half of the primary care physicians who identified patients as suicidal would inquire about their access to firearms.
7. It is very important for medical providers to ask people if they have been in the military and then screen for health problems, mental health issues and suicide in this population. There is also a need to incorporate more geriatric and gender-specific content into programs in the VA. According to the American Psychiatric Association, men in psychological distress face appreciable stigma and barriers and are less likely to seek help than are equally distressed women.

Thank you for the opportunity to testify before you. I would be happy to respond to any questions you may have and look forward to continuing to work with you to address veterans' mental health issues.