Statement of

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Chairman Tillis, Ranking Member Gillibrand, and members of the Subcommittee, thank you for the opportunity to talk to you today about risk reduction and resilience-building to prevent suicide and suicide-related behaviors in DoD and among Veterans.

As you know, the rising suicide rate in DoD and VA is a national problem, not just a problem of the military. And it is fundamentally a problem of unresolved or unidentified mental illness. Psychological autopsy studies show clearly that the vast majority of people who die by suicide in the U.S. suffered from some type of mental illness, most commonly a mood disorder, but often a complex combination of comorbid mood, anxiety, and substance use disorders. If these mental disorders had been resolved, many of the suicides would not have occurred.

Epidemiologic surveys of the U.S. general population show that people with complex mental disorder profiles typically have first onsets of disorders in childhood or adolescence, with a median age-of-onset of 13 years in the U.S. That is, half the people who will ever in their life have a mental disorder have a first onset by age 13. Military personnel are no exception. The Army STARRS study found that the majority of soldiers identified to have mental disorders reported that their first problems started well before they joined the Army.

These initial problems typically are not severe, but rather manifest as childhood phobias, social anxiety disorders, or mild depressions, sometimes coupled with secondary alcohol or drug abuse in adolescence as a form of self-medication. The vast majority of these early disorders go untreated even though they are eminently treatable. They come to clinical attention only later, sometimes many years later, when they have evolved into more complex comorbid syndromes that are more difficult to treat. We have to do a better job of early detection and intervention. Importantly, these early disorders are very common and are not severe enough at the time of military enlistment to be exclusionary. Instead, early intervention is needed to ameliorate these problems before they progress.

It is also important to note that the success of treating mental disorders among patients who have not gotten to the point of becoming suicidal compares favorably with the treatments of most physical disorders. However, there is one big difference: that the range of treatments available for mental disorders is much greater than for most physical disorders. For example, the web site of the VA National Center for PTSD, the leading clinical research center for PTSD in the world, lists no fewer than 10 types of evidence-based psychotherapy and 7 types of evidence-based medication, not to mention the 10 x 7 combinations of psychotherapy and medication that are sometimes used to treat patients with PTSD.

Not all of these treatments work for all patients, although at least one works for the vast majority of patients. And some treatments also work for patients who have gotten to the point of being suicidal. But very little is known about how to pick the right treatment for the right patient. Trial and error is consequently the norm. However, this leads to many treatment failures. After one or more treatment failures, many patients give up and drop out of treatment, often with tragic consequences, even though they would have been helped if they had continued with subsequent treatment trials. We need a better way to pick the right treatment for the right patient right away.

The investigation of that issue is known as "precision medicine." Great progress has been made along these lines in other areas of medicine, but progress in precision psychiatry has been slow because the known biological markers of mental disorders that have been the focus of work to select the best medications for treating mental disorders are too weakly related to treatment response to provide much guidance in picking optimal pharmacologic treatments and tell us virtually nothing about the likely success of psychological treatments. However, a growing body of evidence based on small trials carried out by psychologists shows that psychosocial factors hold out great promise in precision treatment planning for people with mental disorders. We need to invest in the development of precision treatment tools based on these factors to advance the agenda of getting the right treatments to the right patients right away.

In carrying out this work, which will involve both evaluating new interventions and determining which of them work for which patients, it will be important to establish a rigorous and consistent evaluation process. Both DoD and VA have taken important steps in this direction by initiating measurement-based treatment systems to assess behavioral health functioning and suicidality in multiple clinical settings. The DoD in particular has amassed the nation's largest repository of patient-reported clinical outcome data, which includes over 4 million instances

where military beneficiaries have rated how effectively their treatment is working. But more could and should be done. Some examples:

- The idea has been discussed for many years of implementing an inception survey for all DoD personnel beginning service in order to assess pre-enlistment mental disorders, childhood adversities, and other risk and resilience factors for suicidality that might profit from early intervention. Army STARRS carried out such a survey and the results continue to be very important as we follow soldiers over nearly a decade. An ongoing inception survey of this sort for all new recruits coordinated across all DoD branches might be of considerable value in pinpointing new personnel for early intervention as well as for obtaining information that could be used to help guide precision treatment planning. But experimentation and rigorous cost-benefit analysis would be needed to find the best way to present such a survey so as to encourage honest reporting and to determine if the survey has value either in finding new recruits who benefit from early interventions and/or in providing unique background information needed to support precision treatment planning.
- But how would we know if these interventions worked and for whom? As noted above, rigorous evaluation is needed that builds on the existing measurement-based care programs already implemented in DoD and VA. But the current system would have to be expanded and staff added with expertise in advanced statistical methods (e.g., artificial intelligence, other types of machine learning methods) to make that happen.
- It would also be of great value to integrate the many DoD administrative data systems into a consolidated data warehouse that could be used to target, evaluate, and refine

clinical interventions for personnel throughout their military careers. Work along these lines is already underway, but needs to be strengthened and sustained.

- Increased coordination is also needed between DoD and VA. Although progress is being made, the DoD and VA electronic medical records are still not compatible. And the enormous richness that exists in the many other DoD administrative data systems is not available to VA. This needs to change.
- One place is which this need is especially acute is in the transition between active duty and Veteran status. The suicide rate increases substantially after separation, especially in the first two years. The VA Benefits Delivery at Discharge (BDD) Program was developed to help address this problem through improved transition planning. Other pilot initiatives are also currently underway to strengthen these activities. And the STARRS team is using machine learning methods to pinpoint the subset of soon-to-separate personnel who are at greatest risk of post-discharge suicidality for more intensive and prolonged case management, but ongoing implementation of such a system would require greater integration than currently exists across DoD data systems.
- The Veterans Crisis Line and other components of the VHA system could also profit from access to integrated DoD data to help with evidence-based targeting and expansion of interventions, including such things as determining when to "break the glass" on confidentiality if callers are interested in looping in a provider and when VCL personnel should become involved in outbound case management calls.
- And VHA could also profit from an expansion of currently preliminary efforts to develop precision medicine guidelines for choosing among alternative interventions. I

am being a bit self-serving in saying this in that I am involved in several initiatives of this sort with the VA Center of Excellence for Suicide Prevention in Canandaigua, New York. But it is clear that these kinds of initiatives have enormous potential value and should be the focus of more effort than they are currently.

Mr. Chairman, thank you again for the opportunity to share these thoughts with you and your subcommittee. I know my list of potential actions is a long one, but there is much to be done to address the problem of military and Veteran suicide. DoD and VA are leaders in tackling the national suicide problem, but numerous opportunities exist to build on their unique strengths. I look forward to answering your questions.