Suicide Prevention for U.S. Veterans

The Need for Data-Driven Solutions

Rajeev Ramchand

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Suicide Prevention for U.S. Veterans: The Need for Data-Driven Solutions

Testimony of Rajeev Ramchand[1]
The RAND Corporation[2]

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United States House of Representatives

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Good morning Chairman Takano, Ranking Member Bost, and members of the committee. Thank you for the opportunity to speak to you today. I am a senior behavioral scientist at the nonprofit, nonpartisan RAND Corporation, where I also co-direct the newly established RAND Epstein Family Veterans Policy Research Institute. The mission of the institute is to conduct innovative, interdisciplinary, evidence-based research to improve the lives of those who have served in the U.S. military. The research at the institute addresses a variety of issues affecting veterans, including employment, education, housing, health care, and my own areas of expertise—mental health and suicide prevention.

My formal training is in psychiatric epidemiology, and as an epidemiologist, I work with data every day. Over my nearly 15-year career as a scientist at the RAND Corporation, I have been immersed in data on suicides and suicide-related behaviors among U.S. service members and veterans. With my colleagues at RAND, I have examined data on trends in military and veteran suicide rates. I have also collected new data—for example, through surveys with chaplains on their role in preventing suicide and through focus groups with families who have lost a service member or veteran by suicide. When you work with data day in and day out like I do, you quickly learn the limits of existing data. Today, I want to discuss with you how data that are more timely, better quality, and more comprehensive are foundational to preventing veteran

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suicide. Specifically, I am going to address the following four strategies critical for preventing veteran suicides:

1. Improve the national mortality data infrastructure.
2. Use data to better understand veterans' health care experiences outside the U.S. Department of Veterans Affairs (VA).
3. Collect better and more-comprehensive data on veteran firearm ownership and storage.
4. Incentivize researchers to collect data on suicide when testing novel and promising mental health treatments.

Improve the National Mortality Data Infrastructure

In early September, the VA released its annual veteran suicide prevention report indicating that, in 2019, 6,261 veterans took their own lives, a rate of 31.6 deaths by suicide per 100,000 veterans.[3] Although this represents some good news—a reduction in such deaths between 2018 and 2019—it also means that our data on veteran suicide is more than 20 months delayed. Whether the impacts of coronavirus disease 2019 (COVID-19) and, more recently, the withdrawal of U.S. troops from Afghanistan have led to increased suicide rates among veterans are questions that are currently unanswerable because of the lack of timely data on suicide.

Improving the U.S. mortality data infrastructure is the lynchpin for providing more-timely data on veteran suicides. Prior to 2012, the country relied on veteran status reported on death certificates, which were then and still are incomplete.[4] Beginning in 2012, the VA, in partnership with the Department of Defense (DoD) and the Centers for Disease Control and Prevention (CDC), created the Mortality Data Repository.[5] Each year, the Mortality Data Repository links data on veteran status, provided by DoD, to the National Death Index, run by the CDC. Thus, the best data on veteran suicide depend on the availability of timely data in the National Death Index.

There are more than 2,000 jurisdictions across the United States responsible for conducting death investigations, and 57 death-reporting jurisdictions compile these data and provide them to the CDC to create the National Death Index.[6] These death-investigation and death-reporting jurisdictions are all very different from each other: Some are run by medical examiners and some by elected coroners; some are fully electronic and others rely on paper forms and fax machines. A delay in any one of these systems can delay the availability of national data.

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[3] Office of Mental Health and Suicide Prevention, *2021 National Veteran Suicide Prevention Annual Report*, Washington, D.C.: U.S. Department of Veterans Affairs, September 2021.

[4] Claire A. Hoffmire, Rebecca I. Piegari, and Robert M. Bossarte, "Misclassification of Veteran Status on Washington State Death Certificates for Suicides from 1999 to 2008," *Annals of Epidemiology*, Vol. 23, No. 5, 2013, pp. 298–300.

[5] Claire A. Hoffmire, Shannon K. Barth, and Robert M. Bossarte, "Reevaluating Suicide Mortality for Veterans with Data From the VA-DoD Mortality Data Repository, 2000–2010," *Psychiatric Services*, Vol. 71, No. 6, 2020, pp. 612–615.

[6] Randy Hanzlick, "Overview of the Medicolegal Death Investigation System in the United States," in Committee for the Workshop on the Medicolegal Death Investigation System, *Methodological Death Investigation System: Workshop Summary*, Washington, D.C.: National Academies Press, 2003, pp. 7–11.

Improving the national death-investigation infrastructure is a national priority identified by the Mental Health and Suicide Prevention National Response to COVID-19, an initiative launched in the wake of the COVID-19 pandemic by the National Action Alliance for Suicide Prevention. I served on the Data Prioritization Task Force for this Action Alliance effort, and my colleagues and I just published our seven consensus recommendations in the *American Journal of Public Health*.[7] I want to highlight two of those recommendations. First, additional resources are needed to update antiquated systems. Such enhancements will require resources to more quicky collect and transmit data, as well as the resources necessary to conduct comprehensive death investigations. For example, in the case of suicide, death investigators may need to access video surveillance to confirm whether a person jumped, rather than fell, from a tall building—a process that may require laborious coordination among the death investigator, local law enforcement, and private businesses.

With increased resources should come better-quality data. Knowing among which populations suicide risk may be concentrated can help policymakers and other relevant stakeholders direct prevention strategies and appropriate resources toward specific groups. Thus, another of our task force's recommendations is to improve the quality of data collected during death investigations. Specifically, there is some, but limited, evidence suggesting that suicide rates are elevated for veterans who identify as lesbian, gay, bisexual,[8] or transgender.[9] However, data on sexual orientation and gender identity are not routinely collected during death investigations—but should be. Collecting such information would provide much better data on suicide rates among sexual and gender minority populations and provide a way to examine trends in these groups over time. Better-quality data are needed on race and ethnicity as well. According to the VA's 2020 veteran suicide prevention report, American Indian and Alaska Native veterans have the highest rates of suicide,[10] but these individuals' race is often incorrectly coded on death records,[11] resulting in what are likely inaccurate estimates of suicide rates among this group.

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[7] Rajeev Ramchand, Lisa Colpe, Cynthia Claassen, Sam Brinton, Colleen Carr, Richard McKeon, and Michael Schoenbaum, "Prioritizing Improved Data and Surveillance for Suicide in the United States in Response to COVID-19," *American Journal of Public Health*, Vol. 111, No. S2, July 2021, pp. S84–S88.

[8] Kristine E. Lynch, Elise Gatsby, Benjamin Viernes, Karen C. Schliep, Brian W. Whitcomb, Patrick R. Alba, Scott L. DuVall, and John R. Blosnich, "Evaluation of Suicide Mortality Among Sexual Minority US Veterans from 2000 to 2017," *JAMA Network Open*, Vol. 3, No. 12, December 28, 2020, article e2031357.

[9] Taylor L. Boyer, Ada O. Youk, Ann P. Haas, George R. Brown, Jillian C. Shipherd, Michael R. Kauth, Guneet K. Jasuja, and John R. Blosnich, "Suicide, Homicide, and All-Cause Mortality Among Transgender and Cisgender Patients in the Veterans Health Administration," *LGBT Health*, Vol. 8, No. 3, 2021, pp. 173–180; and John R. Blosnich, Taylor L. Boyer, George R. Brown, Michael R. Kauth, and Jillian C. Shipherd, "Differences in Methods of Suicide Death Among Transgender and Nontransgender Patients in the Veterans Health Administration, 1999–2016," *Medical Care*, Vol. 59, 2021, pp. S31–S35.

[10] Office of Mental Health and Suicide Prevention, *2020 National Veteran Suicide Prevention Annual Report*, Washington, D.C.: U.S. Department of Veterans Affairs, 2020.

[11] E. Arias, M. Heron, and J. K. Hakes, *The Validity of Race and Hispanic-Origin Reporting on Death Certificates in the United States: An Update*, Hyattsville, Md.: National Center for Health Statistics, Vital and Health Statistics, Series 2, No. 172, DHHS Publication No. 2016-1372, 2016.

Use Data to Better Understand Veterans' Health Care Experiences Outside the VA

Between 2013 and 2017, 35 percent of veterans who died by suicide had received care at a VA facility in the year before their death.[12] These VA encounters are opportunities to provide veterans with suicide prevention care. The VA has several initiatives underway to increase suicide prevention. Some of the more notable efforts are the VA's Risk-ID suicide screening program,[13] its predictive modeling effort called ReachVet,[14] and its Caring Contact outreach program.[15] However, 75 percent of veterans receive at least some health care outside the VA because they prefer to access non-VA sources of care, they opt to receive care both from the VA and other sources, or they are ineligible for VA care.[16] Although we know much about the VA care that veterans are receiving, we know very little about the care that veterans receive outside of the VA and where there may be opportunities for identifying those at risk of suicide and intervening.

One place to start could be to focus on veterans who are receiving health care through other federal programs, such as Medicare and the Indian Health Service (IHS). Merging health care utilization data from these systems with data from the Mortality Data Repository would help identify when veterans who died by suicide last accessed care, the settings in which they received this care, the types of care they received, and any potential overlap with VA services that eligible veterans may have accessed. The goal of these analyses would be to identify where suicide risk may cluster within health systems so that researchers and practitioners can create and implement tailored interventions to address suicide risk where it is concentrated.

A suite of recent research examining the general U.S. population exemplifies the utility of this kind of research. In a study released in 2019, epidemiologists examined data from California

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[12] Kristen M. Palframan, Benjamin R. Szymanski, and John F. McCarthy, "Ascertainment of Patient Suicides by Veterans Affairs Facilities and Associations with Veteran, Clinical, and Suicide Characteristics," *American Journal of Public Health*, Vol. 111, No. S2, July 2021, pp. S116–S125; and Office of Mental Health and Suicide Prevention, 2020.

[13] Nazanin Bahraini, Lisa A. Brenner, Catherine Barry, Trisha Hostetter, Janelle Keusch, Edward P. Post, Chad Kessler, Cliff Smith, and Bridget B. Matarazzo, "Assessment of Rates of Suicide Risk Screening and Prevalence of Positive Screening Results Among US Veterans After Implementation of the Veterans Affairs Suicide Risk Identification Strategy," *JAMA Network Open*, Vol. 3, No. 10, October 21, 2020, article e2022531.

[14] Greg M. Reger, Mary Lou McClure, David Ruskin, Sarah P. Carter, and Mark A. Reger, "Integrating Predictive Modeling into Mental Health Care: An Example in Suicide Prevention," *Psychiatric Services*, Vol. 70, No. 1, January 1, 2019, pp. 71–74.

[15] Sara J. Landes, JoAnn E. Kirchner, John P. Areno, Mark A. Reger, Traci H. Abraham, Jeffery A. Pitcock, Mary J. Bollinger, and Katherine Anne Comtois, "Adapting and Implementing Caring Contacts in a Department of Veterans Affairs Emergency Department: A Pilot Study Protocol," *Pilot and Feasibility Studies*, Vol. 5, October 10, 2019, article 115.

[16] Christine Eibner, Heather Krull, Kristine M. Brown, Matthew Cefalu, Andrew W. Mulcahy, Michael S. Pollard, Kanaka Shetty, David M. Adamson, Ernesto F. L. Amaral, Philip Armour, Trinidad Beleche, Olena Bogdan, Jaime L. Hastings, Kandice A. Kapinos, Amii M. Kress, Joshua Mendelsohn, Rachel Ross, Carolyn M. Rutter, Robin M. Weinick, Dulani Woods, Susan D. Hosek, and Carrie M. Farmer, *Current and Projected Characteristics and Unique Health Care Needs of the Patient Population Served by the Department of Veterans Affairs*, Santa Monica, Calif.: RAND Corporation, RR-1165/1-VA, 2015, https://www.rand.org/pubs/research_reports/RR1165z1.html.

and found that, compared with the general population, patients who visited emergency departments were more likely to die by suicide within a year of their visit. Risk was highest among those presenting with deliberate self-harm and suicide ideation but was also two times higher than the general population among patients presenting with any other chief concern.[17] This finding provided evidence that patients in emergency departments may be at high risk for suicide. Some emergency departments, such as Parkland Hospital in Dallas, are now screening every patient for suicide risk.[18] And evidence from the Emergency Department Safety Assessment and Follow-Up Evaluation (ED-SAFE) study found that screening and following up with patients after discharge from an emergency department can reduce suicide attempts by 30 percent.[19] By linking veteran mortality data with Medicare and IHS data, we could similarly strengthen suicide prevention outside the VA. Merging the data would enable us to identify patterns of non-VA health care use that are associated with subsequent veteran suicide and use this information to implement targeted suicide prevention strategies that have a proven evidence base or to develop and test new, tailored approaches.

Collect Better and More-Comprehensive Data on Veteran Firearm Ownership and Storage

In 2019, 69 percent of veterans who died by suicide used a firearm to end their lives; among the general population, fewer—48 percent—used a firearm.[20] According to 2015 data, 45 percent of veterans owned at least one firearm, but less than a quarter of these veterans stored all their firearms locked and unloaded.[21] Evidence suggests that many, though not all, suicidal crises are of short duration,[22] and many argue that placing time and space between a person in crisis and his firearm can be life-saving.[23] For these reasons, many suicide prevention strategies are

[17] Sidra Goldman-Mellor, Mark Olfson, Cristina Lidon-Moyano, and Michael Schoenbaum, "Association of Suicide and Other Mortality with Emergency Department Presentation," *JAMA Network Open*, Vol. 2, No. 12, December 2, 2019, article e1917571.

[18] Kimberly Roaten, Celeste Johnson, Russell Genzel, Fuad Khan, and Carol S. North, "Development and Implementation of a Universal Suicide Risk Screening Program in a Safety-Net Hospital System," *Joint Commission Journal on Quality and Patient Safety*, Vol. 44, No. 1, 2018, pp. 4–11.

[19] Ivan W. Miller, Carlos A. Camargo, Jr., Sarah A. Arias, Ashley F. Sullivan, Michael H. Allen, Amy B. Goldstein, Anne P. Manton, Janice A. Espinola, Richard Jones, Kohei Hasegawa, Edwin D. Boudreaux, and ED-SAFE Investigators, "Suicide Prevention in an Emergency Department Population: The ED-SAFE Study," *JAMA Psychiatry*, Vol. 74, No. 6, 2017, pp. 563–570.

[20] Office of Mental Health and Suicide Prevention, 2021.

[21] Joseph A. Simonetti, Deborah Azrael, Ali Rowhani-Rahbar, and Matthew Miller, "Firearm Storage Practices Among American Veterans," *American Journal of Preventive Medicine*, Vol. 55, No. 4, 2018, pp. 445–454.

[22] Eberhard A. Deisenhammer, Chy-Meng Ing, Robert Strauss, Georg Kemmler, Hartmann Hinterhuber, and Elisabeth M. Weiss, "The Duration of the Suicidal Process: How Much Time Is Left for Intervention Between Consideration and Accomplishment of a Suicide Attempt?" *Journal of Clinical Psychiatry*, Vol. 70, No. 1, 2009, pp. 19–24.

[23] K. Hawton, "Restricting Access to Methods of Suicide: Rationale and Evaluation of This Approach to Suicide Prevention," *Journal of Crisis Intervention and Suicide Prevention*, Vol. 28, Supp. 1, 2007, pp. 4–9.

focused on improving veteran firearm storage practices. These strategies include not only state policies that encourage gun owners to store their firearms safely but also clinical interventions, such as the VA's approach in which all Veterans Health Administration clinicians are trained to ask about and counsel patients on firearm access and storage practices. The VA and others have also created media campaigns to change how gun owners store their firearms.

These efforts are noteworthy, but without timely data on firearm ownership, storage practices, and suicide risk, it will be impossible to know whether the efforts are effective at changing veterans' firearm storage practices. A panel of experts convened to improve the U.S. firearm data infrastructure recommended that a semi-annual household survey is needed to collect information on firearm ownership and carriage, risk perception, exposure to firearm violence, and suicide risk specifically. The panel specifically recommended a two-pronged approach for collecting this information: (1) initiating a stand-alone survey of a nationally representative sample focused exclusively on these topics and (2) adding questions on firearm ownership and storage to the National Survey on Drug Use and Health, administered annually by the Substance Abuse and Mental Health Services Administration.[24] The National Survey on Drug Use and Health also asks about veteran status and is therefore ideal for measuring trends in firearm storage practices among veterans. Improved data on household firearm access could inform strategies for preventing not only suicide but other types of firearm violence as well, especially as the United States continues to witness increases in all types of firearm deaths and injuries.[25]

Incentivize Researchers to Collect Data on Suicide When Testing Novel and Promising Mental Health Treatments

Among veterans receiving care at a VA facility, those with mental health and substance use disorders have elevated suicide rates.[26] It logically follows that providing effective treatment for mental health and substance use disorders could help prevent suicide; however, data confirming this hypothesis are sparse and limited to a handful of treatments. The Food and Drug Administration has approved only one drug (Clozapine) for managing suicidal behaviors, and that approval is limited to patients with schizophrenia.[27] Evidence also supports electroconvulsive therapy for reducing suicide risk among severely depressed patients[28] and

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[24] NORC at the University of Chicago, "A Blueprint for a U.S. Firearms Data Infrastructure," press release, October 14, 2020, https://www.norc.org/NewsEventsPublications/PressReleases/Pages/a-blueprint-for-a-u-s-firearms-data-infrastructure.aspx.

[25] Gun Violence Archive, homepage, last updated September 13, 2021, https://www.gunviolencearchive.org.

[26] Office of Mental Health and Suicide Prevention, 2020.

[27] HLS Therapeutics, "Clozaril: Highlights of Prescribing Information," February 2017, http://clozaril.com/wp-content/themes/eyesite/pi/2016i0627_Clozaril_PI_09302016.pdf.

[28] J. Prudic and H. A. Sackeim, "Electroconvulsive Therapy and Suicide Risk," *Journal of Clinical Psychiatry*, Vol. 60, Supp. 2, 1999, pp. 104–110, discussion pp. 111–116.

lithium for reducing suicide risk among veterans with bipolar disorder.[29] Psychotherapies, including dialectical behavioral therapy and cognitive behavioral therapy, may also reduce thoughts of suicide and suicide attempts and can be used to treat broader patient populations than just those with specific conditions or diagnoses.[30]

As new treatments are developed and tested for patients with mental health conditions and substance use disorders, data are needed on whether these therapies specifically affect suicide risk. Particularly relevant to veteran care are new treatments for posttraumatic stress disorder (PTSD). Veterans receiving care at the VA are 13.5 times more likely to have a PTSD diagnosis than non-veterans are.[31] And veterans with PTSD have suicide rates that are more than double that of veterans without a diagnosed mental health condition or substance use disorder.[32] Thus, better treatments for those with PTSD may not only improve their daily functioning and quality of life but also have the potential to reduce suicides. Some new PTSD treatments with promising outcomes include MDMA-assisted psychotherapy,[33] ketamine,[34] mindfulness,[35] and stellate ganglion block.[36] However, although these treatments may reduce PTSD symptoms, there is not yet conclusive evidence on whether they reduce suicide.

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[29] R. J. Baldessarini, L. Tondo, and J. Hennen, "Effects of Lithium Treatment and Its Discontinuation on Suicidal Behavior in Bipolar Manic-Depressive Disorders," *Journal of Clinical Psychiatry*, Vol. 60, Supp. 2, 1999, pp. 77–84, discussion pp. 111–116.

[30] G. K. Brown, T. Ten Have, G. R. Henriques, S. X. Xie, J. E. Hollander, and A. T. Beck, "Cognitive Therapy for the Prevention of Suicide Attempts: A Randomized Controlled Trial," *JAMA*, Vol. 294, No. 5, 2005, pp. 563–570; and M. M. Linehan, K. A. Comtois, A. M. Murray, M. Z. Brown, R. J. Gallop, H. L. Heard, K. E. Korslund, D. A. Tutek, S. K. Reynolds, and N. Lindenboim, "Two-Year Randomized Controlled Trial and Follow-Up of Dialectical Behavior Therapy Vs Therapy by Experts for Suicidal Behaviors and Borderline Personality Disorder," *Arch Gen Psychiatry*, Vol. 63, No. 7, 2006, pp. 757–766.

[31] Eibner et al., 2015.

[32] Office of Mental Health and Suicide Prevention, 2020.

[33] MDMA stands for 3,4-methylenedioxymethamphetamine and is more commonly known as ecstasy. See Jennifer M. Mitchell, Michael Bogenschutz, Alia Lilienstein, Charlotte Harrison, Sarah Kleiman, Kelly Parker-Guilbert, Marcela Ot'alora G, Wael Garas, Casey Paleos, Ingmar Gorman, Christopher Nicholas, Michael Mithoefer, Shannon Carlin, Bruce Poulter, Ann Mithoefer, Sylvestre Quevedo, Gregory Wells, Sukhpreet S. Klaire, Bessel van der Kolk, Keren Tzarfaty, Revital Amiaz, Ray Worthy, Scott Shannon, Joshua D. Woolley, Cole Marta, Yevgeniy Gelfand, Emma Hapke, Simon Amar, Yair Wallach, Randall Brown, Scott Hamilton, Julie B. Wang, Allison Coker, Rebecca Matthews, Alberdina de Boer, Berra Yazar-Klosinski, Amy Emerson, and Rick Doblin, "MDMA-Assisted Therapy for Severe PTSD: A Randomized, Double-Blind, Placebo-Controlled Phase 3 Study," *Nature Medicine*, Vol. 27, No. 6, June 2021, pp. 1025–1033.

[34] Adriana Feder, Michael K. Parides, James W. Murrough, Andrew M. Perez, Julia E. Morgan, Shireen Saxena, Katherine Kirkwood, Marije Aan Het Rot, Kyle A. B. Lapidus, Le-Ben Wan, Dan Iosifescu, and Dennis S. Charney, "Efficacy of Intravenous Ketamine for Treatment of Chronic Posttraumatic Stress Disorder: A Randomized Clinical Trial," *JAMA Psychiatry*, Vol. 71, No. 6, 2014, pp. 681–688.

[35] Ariel J. Lang, "Mindfulness in PTSD Treatment," *Current Opinion in Psychology*, Vol. 14, April 2017, pp. 40–43.

[36] Kristine L. Rae Olmsted, Michael Bartoszek, Sean Mulvaney, Brian McLean, Ali Turabi, Ryan Young, Eugene Kim, Russ Vandermaas-Peeler, Jessica Kelley Morgan, Octav Constantinescu, Shawn Kane, Cuong Nguyen, Shawn Hirsch, Breda Munoz, Dennis Wallace, Julie Croxford, James H. Lynch, Ronald White, and Bradford B. Walters, "Effect of Stellate Ganglion Block Treatment on Posttraumatic Stress Disorder Symptoms: A Randomized Clinical Trial," *JAMA Psychiatry*, Vol. 77, No. 2, February 2020, pp. 130–138.

Clearly, better data are needed on how mental health treatments affect suicide risk. Scientists and organizations testing new treatments should be encouraged and even incentivized to consider how their treatments may ultimately reduce suicide and to specifically test for these effects. A starting point would be to ensure that individuals with suicidal thoughts or past suicide attempts are included in the experimental trials that are being conducted, which would allow researchers to examine the efficacy and side effects of new treatments. Unfortunately, this rarely occurs. Among 75 treatments for PTSD tested between 1980 and 2012, more than half *excluded* patients with active suicide ideation.[37] The same pattern is true for trials of depression treatments: Of studies conducted between 1995 and 2009, 70 percent excluded patients with suicide ideation, and that percentage increased to 86 percent for studies conducted between 2010 and 2014.[38] For treatments that hold promise for reducing suicide attempts, resources should be provided to ensure that trials are designed with enough participants followed over a long enough period to observe these relatively rare events.

As with any experimental trial, ensuring patient safety is paramount. Researchers from the National Institute of Mental Health indicate that, with the appropriate protocols in place, research can be safely conducted with patients who have active suicidal thoughts. According to Dr. Elizabeth Ballard, the lead author of the related study, and her colleagues, "Including patients with suicidal thoughts may not only be appropriate, but even necessary, for generalizing findings to patients seen across clinical setting."[39] In 2018, the Food and Drug Administration released draft guidance for industry, stating only that "Patients with a history of suicidal ideation and behavior *need not be systematically excluded* from trials."[40] A more proactive strategy may be needed to not just *allow* researchers to include patients with active suicidal thoughts in their trials but rather to *actively recruit and monitor them* so that we can understand the benefits that these treatments may have for reducing suicide.

Conclusion

Too many Americans, and too many veterans, die from suicide each year. I am convinced that we can prevent many of these deaths, but we need to invest in data and science to do so. In my testimony today, I recommended four strategies: improve the national mortality data infrastructure, use data to better understand veterans' health care experiences outside the VA, collect better and more-comprehensive data on veteran firearm ownership and storage, and

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[37] Julia M. Ronconi, Brian Shiner, and Bradley V. Watts, "Inclusion and exclusion criteria in randomized controlled trials of psychotherapy for PTSD," *Journal of Psychiatric Practice*, Vol. 20, No. 1, January 2014, pp. 25–37.

[38] Mark Zimmerman, Heather L. Clark, Matthew D. Multach, Emily Walsh, Lia K. Rosenstein, and Douglas Gazarian, "Have Treatment Studies of Depression Become Even Less Generalizable? A Review of the Inclusion and Exclusion Criteria Used in Placebo-Controlled Antidepressant Efficacy Trials Published During the Past 20 Years," *Mayo Clinic Proceedings*, Vol. 90, No. 9, September 2015, pp. 1180–1186.

[39] Elizabeth D. Ballard, Sam L. Snider, Allison C. Nugent, David A. Luckenbaugh, Lawrence Park, and Carlos A. Zarate, Jr., "Active Suicidal Ideation during Clinical Antidepressant Trials," *Psychiatry Research*, Vol. 257, November 2017, pp. 303–308.

[40] Center for Drug Evaluation and Research, *Major Depressive Disorder: Developing Drugs for Treatment Guidance for Industry*, Silver Spring, Md.: Food and Drug Administration, June 2018, emphasis added.

incentivize researchers to collect data on suicide when testing novel and promising treatments. These investments could help save veterans' lives. I thank you again for inviting me to speak with you today and look forward to your questions.