National Alliance on Mental Illness

STATEMENT of

NAMI, National Alliance on Mental Illness

for the Record

House Committee on Veterans' Affairs: Subcommittee on Health

"Beyond the Million Veterans Program: Barriers to Precision Medicine"

Written Testimony Submitted by:

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I. Introduction

Chairwoman Brownley, Ranking Member Dunn and distinguished members of the Subcommittee, on behalf of NAMI, the National Alliance on Mental Illness, and NAMI Montana, I would like to extend our gratitude for the opportunity to share with you our views and recommendations regarding “Beyond the Million Veterans Program: Barriers to Precision Medicine.” NAMI Montana and the entire NAMI community applauds the Committee’s dedication in addressing the critical issues around the veterans’ brain healthcare system. NAMI is the nation’s largest grassroots mental health organization dedicated to building better lives for the millions of Americans affected by mental illness. NAMI advocates for access to services, treatment, support and research, and is steadfast in its commitment to raising awareness and building a community of hope for all of those in need.

NAMI works closely with many partners to accelerate research and advance treatment for mental health conditions. For example, NAMI Montana is a member of the Coalition to Heal Invisible Wounds (Coalition). The Coalition was founded in February 2017 to connect leading public and private scientific investigators of new post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI) treatments with policymakers working to improve care for veterans. Coalition members support innovators at all stages of the therapy development lifecycle, from initial research to late-stage clinical trials.

In addition to serving as the Executive Director of NAMI Montana, I am also the Director of the Center for Mental Health Research and Recovery (CMHRR) at Montana State University. While the CMHRR does have statewide suicide prevention research, none of that research funding presents a conflict with this testimony. I have also been appointed to the Creating Options for Veterans' Expedited Recovery (COVER) Commission. This testimony does not reflect the views of Montana State University, the Montana University System, or the COVER Commission.

I. Overview

With our commitment to promote innovation to accelerate research and advance treatment for mental health conditions, NAMI remains very supportive of the research and development of psychiatric biomarkers for brain health conditions, and we encourage Congress to make the necessary investments in research to begin to accomplish this goal.

NAMI continues to advocate for VA to work in coordination with the Department of Defense (DoD) to develop and carry out a longitudinal research study which will identify biomarkers or non-survey diagnostic tools, which will enable clinicians to make a more precise diagnosis.

NAMI advocates for improving mental health and brain condition diagnostics because an accurate, quick, and early diagnosis has the potential to save countless lives and is a critical step to effective care. Currently, the only tools available to diagnose a mental health condition are survey-based. This results in a large amount of misdiagnosis of conditions, and therefore

lack of timely and appropriate treatment. We are dedicated to working with the VA, legislators, and researchers to improve the process and get veterans the treatment and care they need for their recovery. Earlier identification of conditions will lead to better treatment for these conditions, which is a necessary component to reducing suicides among Veterans.

II. Background

A. Scientific Justification

Suicide is the 10th-leading cause of death in the United States, and Veteran suicide is a national concern. According to the VA National Suicide Data Report, in 2016, the suicide rate was 1.5 times greater for Veterans than for non-Veteran adults. According to the authors of *Suicide Among Soldiers: A Review of Psychosocial Risk and Protective Factors,* "The fact that the vast majority of suicides occur among people with a current mental disorder makes this risk factor a prime target for screening and prevention efforts."[1]

However, the state of the science in the screening, diagnosis and treatment of mental health conditions is in flux. A strong analysis of this issue is given by Dr. Thomas Insel, MD, et al. in the paper introducing the National Institute of Mental Health's Research Domain Criteria effort. At the time this article was published, Dr. Insel was the Director of the National Institute of Mental Health (NIMH):

> *Current versions of the DSM and ICD have facilitated reliable clinical diagnosis and research. However, problems have increasingly been documented over the past several years, both in clinical and research arenas. Diagnostic categories based on clinical consensus fail to align with findings emerging from clinical neuroscience and genetics. The boundaries of these categories have not been predictive of treatment response. And, perhaps most important, these categories, based upon presenting signs and symptoms, may not capture fundamental underlying mechanisms of dysfunction. One consequence has been to slow the development of new treatments targeted to underlying pathophysiological mechanisms.*
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> *History shows that predictable problems arise with early, descriptive diagnostic systems designed without an accurate understanding of pathophysiology. Throughout medicine, disorders once considered unitary based on clinical presentation have been shown to be heterogeneous by laboratory tests—e.g., destruction of islet cells versus insulin resistance in distinct forms*

[1] Nock, Matthew K., et al. "Suicide among soldiers: a review of psychosocial risk and protective factors." *Psychiatry: Interpersonal & Biological Processes* 76.2 (2013): 97-125.

> *of diabetes mellitus. From infectious diseases to subtypes of cancer, we routinely use biomarkers to direct distinct treatments. Conversely, history also shows that syndromes appearing clinically distinct may result from the same etiology, as in the diverse clinical presentations following syphilis or a range of streptococcus-related disorders.*[2]

The critical nature of this issue to the VA's services is one of both severity (veteran suicide) and scope. According to the VA's Office of Research and Development, "More than 1.8 million Veterans received specialized mental health care from VA in fiscal year 2015."[3]

Therefore, the VA serves almost 2 million veterans a year in a treatment system based upon mental health diagnosis categorizations that the former Director of the National Institute of Mental Health has deemed not to be "predictive of treatment response"[4] (emphasis added). The ramifications of that dramatic flaw in the VA's mental health treatment system presents a glaring fissure in our ability to prevent veteran suicides.

B. Personal Justification

My family lost my stepbrother Specialist Christopher Dana to a post-traumatic stress injury in March of 2007. His post-traumatic stress injury stemmed from a brutal tour in Iraq as a HUMVEE machine gunner with the Montana National Guard. The Montana National Guard medical professionals had no idea that Chris was struggling with a brain health condition until he took his life. I will not go into depth about Chris's story now. However, I can't help but wonder what a more effective system for screening, diagnosing, and treating brain health conditions would have done for Chris.

Instead I will focus the personal side of this testimony on two of my dear friends, John Scott Hannon and Mike Franklin, who tragically died by suicide, and how their stories relate to precision mental health.

1. Commander John Scott Hannon
   (a) Obituary

Commander John Scott Hannon USN (Ret.), affectionately known to his family as "Scott," was born April 11, 1971, in Nairobi, Kenya. Born to a U.S. Diplomatic Corps family, he grew up living

[2] Insel, Thomas, et al. "Research domain criteria (RDoC): toward a new classification framework for research on mental disorders." (2010): 748-751.

[3] Office of Research & Development website. Department of Veterans Affairs. Accessed on June 19, 2019. https://www.research.va.gov/topics/mental_health.cfm

[4] Insel, Thomas, et al. "Research domain criteria (RDoC): toward a new classification framework for research on mental disorders." (2010): 748-751.

in Tanzania, the Soviet Union, England, Belgium, as well as McLean, VA, and Helena, MT. In 1989, Scott enlisted in the U.S. Navy and qualified as a Gunner's Mate in 1990. He graduated with BUD/S Class 173 in March 1991 and, upon completion of SEAL Qualification Training, was assigned to SEAL Team Two. From 1995 to 1998, Scott completed multiple deployments in Europe, Middle East and Asia with SEAL Team Five, where he was top ranked SEAL Assistant Platoon Leader. He served with SEAL Team Three in the Pacific and Southwest Asia and was named top ranked SEAL Platoon Commander. From 2000 to 2003, Scott was assigned to SEAL Delivery Vehicle Team Two operating mini submarines and became Task Unit Commander. Scott was the top-rated officer during a six-month advanced maritime special operations course, the most demanding joint training available in the military, and was hand-selected to lead a covered unit in a sensitive "Preparation of Battlespace" mission. In 2003, he joined the Naval Special Warfare Development Group, commonly known as SEAL Team Six, and was eventually responsible for all aspects of curriculum development and individual certification. John Scott graduated in 1995 from the University of Colorado with a B.A. in Political Science. He attended school on a Naval Reserve Officers Training Corps (NROTC) scholarship. From 2006 to 2008, he received a scholarship to attend the Tuck Business School at Dartmouth College, then worked as a Special Operations and Policy Staff Officer at the U.S. Special Operations Command (USSOCOM) until he retired in 2012.[5]

John Scott's supervisory, technical and safety qualifications include Military Freefall Specialist, Static Line Parachutist, NSW Sniper (Honor Graduate), Naval Gunfire Forward Controller, Lead Climber, High Performance Small Boat Coxswain, Diving Supervisor, Cast Master, Rope Master, Live Fire Range Supervisor, Joint Special Operations Planner, Amphibious Operations Planner, Advanced High Risk Survival & Hostage Survival, Advanced Combat Trauma Care Provider, Long Range MAROPS, Expeditionary Warfare Staff Planning, Customized Military Mobile Force Protection and others. Scott was also awarded the Joint Service Commendation medal, Defense Meritorious Service medal, Navy and Marine Corps Commendation medal (3), Joint Service Achievement medal, and the Navy, Marine Corps Achievement medal (2) and Joint Meritorious Service Award, and Bronze Star Medal (Gold Star in lieu of the Second Award). After 23 years of military service, Scott retired to his family home near Helena, Montana. In addition to VA Montana treatment for Post-Traumatic Stress Disorder, Traumatic Brain Injury, severe depression and bipolar disorder, he was a committed volunteer with a number of local organizations. He was involved with the Montana chapter of NAMI, speaking candidly at events about his wartime injuries. Scott also rescued and rehabilitated injured wild animals at Montana Wild, provided training support for the Lewis and Clark Search and Rescue, worked with at-risk youth with Habitat for Humanity and collaborated with the Prickly Pear Land Trust to help veterans access nature trails.[6]

John Scott was open about his invisible wounds of war and found solace and recovery in many of the causes that also allowed him to give back to his fellow veterans and his community. He

[5] https://www.veterans.senate.gov/imo/media/doc/hannon.bio.pdf

[6] *Id*.

was passionate about improving veterans' access to mental health care and integrating service animals into mental health care. Scott worked closely with Montana Wild and VA Montana to develop a group therapy program for veterans that involved birds of prey. Scott was embraced on his journey to recovery by his family, friends, and community. He died from his invisible wounds of war on February 25, 2018.[7]

(b) Relationship to Precision Medicine

I became friends with John Scott and his family after they asked me to help him connect to resources and build social support. I was there for many of the good times and hard times throughout his battle with brain health conditions.

A few months after John Scott's death, I met with his family at their ranch near Helena. We laughed and cried. We especially talked about how frustrating it was that he had worked so hard for recovery only to lose his life at the end. John Scott had come to a good place with his post-traumatic stress injury. He had overcome addiction. He was learning to live with his mild traumatic brain injury, but it was the dramatic highs and lows of bipolar disorder which could not be overcome.

I will never forget the words that John Scott's sister Kim Parrott said that day. "I just wish we had known about the bipolar disorder earlier." I couldn't agree more that the missed diagnosis, the missed factor in brain health treatment, could have made a significant difference if it had been factored into his treatment from the start.

2. Mike Franklin
   (a) Obituary

Mike Franklin, age 59, died September 20, 2014 of depression after a long and courageous battle. Born and raised in Anderson, South Carolina, he was a true Southern gentleman who fell in love with Montana's Rocky Mountains.

Where he worked last was what he loved most: his job at Carroll College for the last 11 years as the Director of Counseling Services. He loved the students and his colleagues. In the 15 years before coming to Carroll College he served as a U.S. Naval chaplain and earned a master's degree at Yale University. He spent three years as a Methodist minister after earning his Master of Divinity from Duke University and, true to his nature, he was still in contact with the parishioners of the small parish he ministered to 29 years ago. Prior to finding his calling as a spiritual minister, he served as a U.S. Army officer for five years after graduating from West Point. He graduated from T.L. Hanna High School in Anderson, SC in 1973 where he played football, the start of a passion for intense sports. He found joy in parachute jumping, rugby, skiing, kayaking and river boarding in rivers above his skill level and hiking off the beaten path.

[7] https://www.veterans.senate.gov/imo/media/doc/hannon.bio.pdf

Who he loved last and loved best was his wife Georgia Lovelady, whom he married on July 9, 2011 on the campus of Carroll College. A close second was his dog and constant companion, Gracie, who died in May, four months before his own death. Mike was generous in all ways including with his time, his knowledge, and mentoring others. He was unfailingly kind, gregarious, spiritual, and funny (including two stints of stand-up comedy at the local brewery). He reached out to others even when he himself was struggling.

Mike is survived by so many who loved him dearly. If love alone could have kept him from the depths of depression, he would have sailed above his mental illness.

(b) Relationship to Precision Medicine

My friend Mike Franklin had treatment-resistant depression. This condition is described by the Depression Task Force that authored "Treatment Resistant Depression: A Multi-Scale, Systems Biology Approach."

> *An estimated 50% of depressed patients are inadequately treated by available interventions. Even with an eventual recovery, many patients require a trial and error approach, as there are no reliable guidelines to match patients to optimal treatments and many patients develop treatment resistance over time. This situation derives from the heterogeneity of depression and the lack of biomarkers for stratification by distinct depression subtypes. There is thus a dire need for novel therapies.*[8]

One of the Depression Task Force's members is Dr. Joshua Gordon MD, PhD. Dr. Gordon is now the Director of the National Institute of Mental Health. From that position, Dr. Gordon is able to advance the Depression Task Force's vision of developing more effective depression treatments based upon more specific measurements and categorization—precision medicine.

> *Recent advances in methodologies to study genetic and epigenetic mechanisms, as well as the functioning of precise brain microcircuits, prompt new optimism for our ability to parse the broad, heterogeneous syndrome of human depression into biologically-defined subtypes and to generate more effective and rapidly-acting treatments based on a knowledge of disease etiology and pathophysiology and circuit dynamics.*[9]

[8] Akil, Huda, et al. "Treatment resistant depression: a multi-scale, systems biology approach." *Neuroscience & Biobehavioral Reviews* 84 (2018): 272-288.

[9] Akil, Huda, et al. "Treatment resistant depression: a multi-scale, systems biology approach." *Neuroscience & Biobehavioral Reviews* 84 (2018): 272-288.

This is exactly the kind of breakthroughs that will save the lives of veterans with treatment-resistant depression like my friend Mike Franklin.

III. Scientific Progress

A. The emergence of transdiagnostic biological indications of brain conditions and susceptibility for brain conditions expand the paradigm of thinking about how these biosignatures can be used beyond the traditional psychiatric diagnostic categories.

The scientific search for biological signatures to guide the screening, diagnosis, and treatment of psychiatric conditions has evolved beyond the traditional diagnostic categories into more of a transdiagnostic viewpoint. As described by Beauchaine and Constantino:

> *An emerging consensus in the psychopathology research community is that complex functional interactions among a limited number of neural and hormonal systems – far fewer in quantity than syndromes defined in the psychiatric nomenclature – give rise to many if not most mental health conditions.*[10] *From this perspective, endophenotypes might be more effectively reconstrued as markers of genetic liability to transdiagnostic vulnerability traits (e.g., impulsivity, irritability, anhedonia). As Skuse noted over 15 years ago, '…a focus on traits, rather than syndromes, is appropriate and could in due course contribute to the redefinition of traditional psychiatric syndromes.' When reframed in this way, common neural correlates of psychopathology among what have traditionally been considered as distinct disorders are no longer a nuisance in our quest for greater specificity, but are instead opportunities to better understand common etiologies.*[11]

This is a critical move forward for the scientific research of biosignatures that can affect the care of brain health conditions. I have included a couple of block quotes below from this line of research in Functional Magnetic Resonance Imaging, Genetics, and Blood Plasma. Interestingly, the transdiagnostic nature of these measurements also make it clear that these units of analysis will not replace, but will only add to additional insights and to a variety of

[10] Beauchaine, Theodore P., and John N. Constantino. "Redefining the endophenotype concept to accommodate transdiagnostic vulnerabilities and etiological complexity." *Biomarkers in medicine* 11.9 (2017): 769-780.
[11] Beauchaine, Theodore P., and John N. Constantino. "Redefining the endophenotype concept to accommodate transdiagnostic vulnerabilities and etiological complexity." *Biomarkers in medicine* 11.9 (2017): 769-780

treatment occupations: psychiatrics, psychologists, primary care providers, therapists, peer support specialists, etc.

1. Functional Magnetic Resonance Imaging

> *Neuropsychological performance, gray matter volume, and now functional brain activation evidence converge to implicate transdiagnostic disruptions in the neurocircuits underlying general cognitive control capacity. Functional disruptions parallel the multiple demand network and its interface with the salience network. Essentially, networks intrinsic to adaptive, flexible cognition are vulnerable to a broad spectrum of psychopathology. These findings highlight a common intermediate phenotype, which could be leveraged to advance therapeutics. Multimodal interventions that target the foundation of intact, dynamic cognition seated in these frontal-parietal-cingular-insular networks could be powerful for ameliorating not only symptomatic distress but also the often-pervasive functional impairments and diminished quality of life prevalent across psychiatric disorders.*[12]

2. Genetics

> *In recent years, there has been considerable progress in our understanding of the genetics of common neuropsychiatric disorders, for which neurobiological leads have been elusive. It is now clear that these disorders are highly polygenic, involving thousands of common as well as rarer genetic variants that, together with environmental risk factors, collectively increase an individual's chances of developing such a condition. It is also apparent that many of these risk variants are shared between neuropsychiatric diagnoses. As sample sizes have grown, both common and rare genetic risk loci for neuropsychiatric disorders have been identified with high confidence. Associations between neuropsychiatric disorders and common variants identified by GWAS appear to largely reflect regulatory genetic variation, which might operate on specific gene transcripts, in circumscribed cell populations and at particular developmental stages. For some neuropsychiatric phenotypes, particularly those with clear neurodevelopmental features, stronger effects on risk may be conferred by rare and de novo CNVs and exonic mutations that*

[12] McTeague LM, Huemer J, Carreon DM, Jiang Y, Eickhoff SB, Etkin A. Identification of Common Neural Circuit Disruptions in Cognitive Control Across Psychiatric Disorders. *Am J Psychiatry*. 2017;174(7):676–685. doi:10.1176/appi.ajp.2017.16040400

can result in hemizygous loss of gene function. With even greater sample sizes, and comprehensive genotyping through whole genome sequencing, many more genetic risk loci for neuropsychiatric disorders will be identified in coming years. Translating these discoveries into an understanding of molecular, cellular and neurophysiological mechanisms underlying neuropsychiatric conditions will require the expertise of researchers in many areas of neuroscience.[13]

3. Blood Plasma

Of the six molecules most commonly studied as plasmatic markers of schizophrenia, major depressive disorder or bipolar disorder, five (BDNF, TNF-alpha, IL-6, C-reactive protein and cortisol) were the same across diagnoses… Meta-analyses showed variation in the levels of these molecules to be robust across studies, but similar among disorders, suggesting them to reflect transdiagnostic systemic consequences of psychiatric illness.[14]

B. Examples - Precision Mental Health to Advance Care for Post-Traumatic Stress Injuries and Depression

Dr. Amit Etkin MD, PhD, and his team at the Palo Alto VA and Stanford University are tackling some of the most critical questions about how to improve the diagnosis and treatment of psychiatric conditions. The group recently published the results of its groundbreaking study, "Using FMRI Connectivity to Define a Treatment-Resistant Form of Post-Traumatic Stress Disorder."[15] As stated in that research:

"We found that a subgroup of patients with PTSD from two independent cohorts displayed both aberrant functional connectivity within the ventral attention network (VAN) as revealed by functional magnetic resonance imaging (fMRI) neuroimaging and impaired verbal memory on a word list learning task. This combined phenotype was not associated with differences in symptoms or comorbidities, but nonetheless could be

[13] Bray NJ, O'Donovan MC. The genetics of neuropsychiatric disorders. *Brain Neurosci Adv*. 2019;2:10.1177/2398212818799271. doi:10.1177/2398212818799271

[14] Pinto, Jairo Vinicius, Thiago C. Moulin, and Olavo B. Amaral. "On the transdiagnostic nature of peripheral biomarkers in major psychiatric disorders: a systematic review." *Neuroscience & Biobehavioral Reviews* 83 (2017): 97-108.

[15] Etkin, Amit, et al. "Using fMRI connectivity to define a treatment-resistant form of post-traumatic stress disorder." *Science translational medicine* 11.486 (2019): eaal3236.

used to predict a poor response to psychotherapy, the best-validated treatment for PTSD."[16]

The "Establishing Moderators and Biosignatures of Antidepressant Response for Clinical Care for Depression (EMBARC)" has made significant strides in their analysis of depression.[17] That effort and related efforts by Dr. Madhukar Trivedi's team at the University of Texas Southwestern have identified potential biosignatures involving inflammation,[18] blood,[19,20] and advanced imaging.[21]

IV. Recommendations

NAMI offers the following recommendations to help reduce barriers to precision medicine.

A. Enact the Precision Mental Health initiative in the bipartisan *Commander John Scott Hannon Veterans Mental Health Care Improvement Act of 2019 (S. 785)*.

On March 13, 2019, Senators Jon Tester (D-Mont.) and Jerry Moran (R-Kan.) introduced the *Commander John Scott Hannon Veterans Mental Health Care Improvement Act of 2019*. The bill was named after my friend, Navy SEAL Commander John Scott Hannon, who served for 23 years and fought a courageous battle with post-traumatic stress, traumatic brain injury and bipolar disorder. NAMI believes that this legislation has the potential to increase access to mental health care, expand diagnostic research and authorize new programs to combat veteran suicides.

Significantly, the legislation also includes a requirement for the VA to implement an initiative to identify and validate brain and mental health biomarkers among veterans (Section 305). The initiative would be modeled after the National Institutes of Health's *All of Us* program, with a

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[16] *Id*.

[17] National Institute of Health, National Library of Medicine, Clinical Trials.gov website. Accessed on June 19, 2018. https://clinicaltrials.gov/ct2/show/NCT01407094

[18] Jha, Manish, and Madhukar Trivedi. "Personalized antidepressant selection and pathway to novel treatments: clinical utility of targeting inflammation." *International journal of molecular sciences* 19.1 (2018): 233.

[19] Czysz, Andrew H., et al. "Can targeted metabolomics predict depression recovery? Results from the CO-MED trial." *Translational psychiatry* 9.1 (2019): 11.

[20] Furman, Jennifer L., et al. "Adiponectin moderates antidepressant treatment outcome in the combining medications to enhance depression outcomes randomized clinical trial." *Personalized medicine in psychiatry* 9 (2018): 1-7.

[21] Cooper, Crystal M., et al. "Cerebral blood perfusion predicts response to sertraline versus placebo for major depressive disorder in the EMBARC trial." *EClinicalMedicine* (2019).

focus on post-traumatic stress disorder, traumatic brain injury, depression, and severe anxiety disorders. NAMI believes that if enacted, this initiative has the potential to have a have a lasting effect on the future of the diagnosis and treatment for mental health conditions.

B. Ensure that the Veterans Equitable Resource Allocation (VERA) model supports precision healthcare initiatives.

The next stage of developing Precision Medicine in the VA requires both research and translation into clinical practice. This will require the participation of VA facilities outside of the flagship institutions. This will be essential not only for assuring the right number of participating veterans, but also to ensure that a diversity in the types of veterans are included. Precision medicine will be specific enough that groups that are not included in the research will not benefit from all of the findings.

NAMI recognizes that VERA is critical to how facility administrators are measured. The VERA model must be aligned to support a broadscale research and translational initiative. If precision medicine efforts are not properly incentivized in VERA, NAMI fears that the lack of local incentivization will stunt precision medicine efforts in the VA.

C. Structure VA research data in a manner where a machine learning natural language processing program can generate the beginnings of the first draft of a research article based on the data in the system.

The success of the VA's Precision Medicine efforts will depend on a variety of factors. There are issues of safety, regulation, investigator recruitment, technology, etc. One of the issues that is easily overlooked is that there will have to be a lot of papers written about the VA's Precision Medicine results. Published articles are critical to how the VA makes its own internal treatment decisions through Clinical Practice Guidelines.[22] Published articles are also essential to have the lessons learned in the VA's Precision Medicine efforts translate over to clinicians in the community.

In my time at the COVER Commission, I have met VA researchers who have data that they do not have the time to write manuscripts to publish. This presents a serious wasted opportunity to advance veterans' mental health care. NAMI recognizes that the VA does not have as many clinician researchers as would be ideal to tackle the enormous challenge of addressing mental health challenges amongst veterans. Therefore, the VA must take as much of the "busy work" as possible out of the process of writing papers to enable the researchers to focus on their clinical work.

While there may not have been a lot of options to do this in the past, the current machine learning natural language processing technology has made an additional option available. NAMI recommends that VA consider this technology.

The extent of this "not having time to write up the data" problem is only going to get worse as the amount of actionable medical data increases as the world moves toward precision medicine. It's a problem that can and should be partially resolved through technology. We can't afford to

[22] *See e.g.* VA/DOD Major Depressive Disorder Clinical Practice Guidelines, Version 3.0-2016. Available at https://www.healthquality.va.gov/guidelines/MH/mdd/VADoDMDDCPGFINAL82916.pdf

have critical veteran medical research data left outside of the research community. There is just too much at stake.

V. Conclusion

Thank you again for the opportunity to testify in front of this honorable Committee. Your attention to this issue means a lot to me, our entire NAMI organization, veterans and their families. We look forward to working with you to save the lives of America's heroes.

Sincerely,

Matt Kuntz, J.D.
Executive Director
NAMI Montana