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Real world outcomes: Improving the accessibility and reducing  
the cost of mental health care delivery with VetsPrevail

2015

## Executive summary

- In 2013, as part of its efforts to improve the accessibility of mental health care, the Department of Veterans Affairs contracted with Prevail Health to deliver VetsPrevail annually. We analyzed the effects of delivering the program to 6,900 veterans who are struggling with a range of mental health issues and not currently seeking care through the VHA.
- Founded in partnership with the National Science Foundation and backed by multiple clinical trials, Prevail Health is a leader in digital behavioral health and resilience building. Its programs have achieved clinical effectiveness equivalent to traditional therapy through the use of novel technology that assesses, triages, and supports online veterans with mental health challenges.
- VetsPrevail's personalized programs integrate peer coaching, online communities, interactive cognitive behavioral therapy lessons, and gamification that achieved high levels of engagement. During 2013, in addition to the 6,900 enrolled veterans we analyzed for this report, this engagement included: several thousand additionally enrolled veterans who were also receiving care through the VA, 85,000 visits to the VetsPrevail community, 20,400 questions and answers from users, among other metrics.
- Of the 6,900 veterans not receiving VA care served through VetsPrevail who we analyzed, 2,269 met the criteria for probable depression (score of 11 on the PHQ-9 assessment) and 1,031 of those veterans engaged with VetsPrevail's online programs enough to achieve clinical benefit. The result was **\$3.7 million** in savings for the VA and an ROI of 14.8 for the VA's spending on VetsPrevail. Importantly, this number only includes savings for direct mental health care costs, not indirect costs like comorbid conditions.
- On the basis of these strong results, and multiple earlier pilot programs and clinical trials, the VA and VetsPrevail continue to work together to improve the accessibility of mental health care through online care and support.

## Mental health crisis among US veterans

Extensive bodies of research have thoroughly documented the mental health crisis US veterans are currently facing. Of the more than 2.4 million service members who have recently returned from deployment in support of operations in Iraq and Afghanistan an estimated 900,000 will develop mental health issues, primarily posttraumatic stress disorder (PTSD) and depression.<sup>1</sup> A recent RAND report commissioned by the VA found that less than 25% will receive effective support or treatment.<sup>2</sup>

When you combine this figure with veterans of previous conflicts, approximately 1.5 million veterans sought mental health care through the Veterans Health Administration (VHA) in 2013.<sup>3</sup> Yet these are only a small portion of the veterans with a diagnosable mental health issue. Research in the New England Journal of Medicine shows that nearly 65% of veterans will not seek care, due primarily to stigma, perception, and lack of awareness of an issue.<sup>4</sup>

There is a progressive set of consequences when deployment-related mental disorders go unaddressed. PTSD and depression can lead to unemployment, substance abuse, homelessness and even suicide. Many of these consequences can be understood when accounting for the fact that veterans experience levels of distress at 4.5 times higher rates than their civilian counterparts.<sup>5</sup> Additionally, veterans living with PTSD, depression or both face an increased risk of various health problems, as well as double the risk for committing suicide as compared with civilians.<sup>6</sup> Daily functioning problems impact veterans<sup>7</sup> including frequently having tumultuous relationships with family and friends.<sup>8</sup> Maladaptive coping mechanisms have also been found to affect veterans at a disproportionate rate, with many veterans utilizing alcohol or drugs to manage their problems rather than seeking treatment.<sup>9</sup>

However, the availability of effective services is not necessarily the problem as there are several proven treatments for the mental health issues that affect these service members. The Department of Defense Task Force on Mental Health reported that several major roadblocks stand in the way of providing sufficient mental health care to those military personnel returning from Iraq and Afghanistan. The most significant of these barriers is the stigma surrounding mental health care among military service members. Military respondents, in a study published in the New England Journal of Medicine, reported that receiving mental health services might make members of their unit have less confidence in them, cause leadership to treat them differently, and cause them to be seen as weak.<sup>10</sup> The VHA is addressing these barriers by allocating more resources to mental health services for veterans: there was a 57% increase in funding for mental health services since 2009 and commitments to providing innovative services like VetsPrevail.

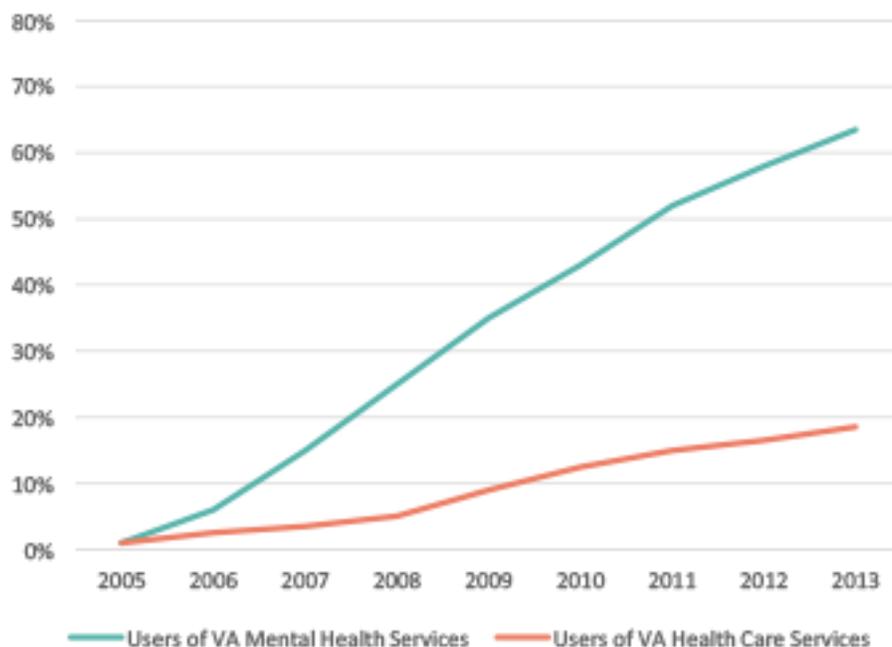
With a nearly \$60 billion annual budget for health care, including seven billion dollars spent annually on mental health and \$600 million spent on telehealth, the VHA is looking for better ways to deliver mental health care to reluctant care seekers, which many veterans are.

As part of those efforts, the VA is forming new partnerships to bring innovative solutions to

improving access to care and outcomes. One such partnership is with Prevail Health, which provides a highly-effective online approach for identifying behavioral health challenges, mitigating symptoms, and building resilience among reluctant care seekers. Multiple clinical trials of Prevail Health’s programs and its real-world results achieved outcomes similar to face-to-face therapy for 1% of the cost of traditional interventions. Prevail Health’s online programs provide an individualized experience for each user, integrating support from peer coaches, active online communities, and interactive lessons. VetsPrevail is one such program built on the Prevail Health platform and designed to meet the unique needs of America’s 30 million veterans. It is now delivered nationally to the Veterans Health Administration.

The incorporation of online routes to mental health care aligns with growing trends in patient preferences particularly among younger generations, and it supports the VA’s systematic approach to improving its mental health treatment programs. The VA closely monitors the VetsPrevail program outcomes and usage (aggregate, not individual users). VetsPrevail is regularly evaluated both internally by the VA and externally by research institutions conducting clinical trials as part of the VA’s process for identifying and clinically validating innovations in mental health care for veterans.<sup>11</sup>

Percentage growth since 2005 in number of users of VA health services



## The VetsPrevail program delivered through VHA

As part of the national roll-out of VetsPrevail with the VHA, a population analysis was conducted utilizing the results from approximately one year of VetsPrevail services provided under contract with the VHA beginning in 2013. The study focused on analysis of services delivered to veterans who were not simultaneously undergoing treatment from the VA. VetsPrevail became available to veterans nationally with the objective of 1) identifying veterans facing mental health challenges and not currently receiving care, 2) convincing them to take a first step by seeking care through VetsPrevail, and 3) triaging veterans into traditional services provided by the VHA as needed. The veterans served by VetsPrevail have several barriers to care in line with the general symptomology of veterans nationally, which ranged from rural geography to stigma to a lack of understanding of the signs of mental health challenges.

VetsPrevail offers a comprehensive online care and support program for veterans that was validated in two independent clinical trials, including a randomized control trial completed in 2013. VetsPrevail comprises four key components: interactive cognitive behavioral therapy (CBT) lessons, certified peer coach specialists, a vibrant online community of veterans supporting veterans, and dynamic clinical assessments. The interactive format, customized based on each user's clinical and demographic assessment, addresses the unique challenges veterans face when returning to civilian life. By creating anonymous, on-demand care, many of the barriers including stigma and access are effectively circumvented for veterans. Gamification is also an important component, allowing users to earn rewards for their progression through VetsPrevail.

Users begin the VetsPrevail program by taking a dynamic demographic and clinical assessment for PTSD, depression, anxiety, and stigma perception, among others. Industry standard clinical assessments are used throughout the program, including the PCL-M, which has been clinically modified to measure for military specific PTSD, and the PHQ-9 measure for depression.<sup>12, 13</sup> Historical research has provided consistent and normed data on these measurements' high validity and reliability. Based on the assessment results, VetsPrevail provides a personalized program that improves engagement and ultimately outcomes.

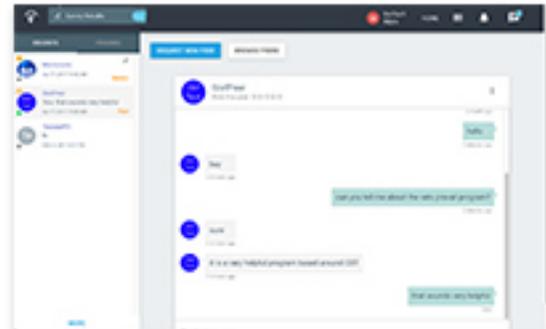
The curriculum is based on CBT, a treatment model with decades of empirical research to support its effectiveness at reducing the symptoms of mental health issues. A core component of the CBT lessons are built on facilitating users and their ability to recognize negative thought patterns, which ultimately impacts their behaviors and actions. The demographic information collected is also used in order to frame the vignettes and tailored scenarios around issues that the users find personally relevant.

## VetsPrevail program components



### Dynamic Assessments

Clinical and demographic assessments allow us to personalize programs for each user.



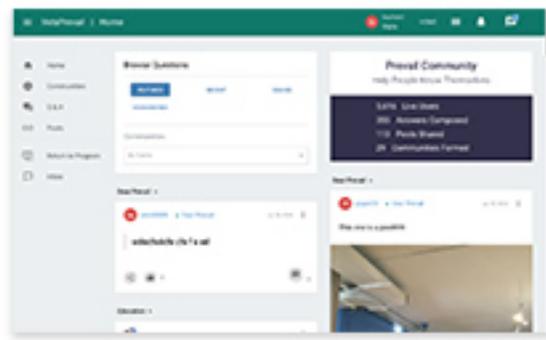
### Peer Coaching

Live support from coaches who identify users' needs, build trust, and improve the user's readiness to act.



### Personalized CBT Training

Engaging, interactive training tailored to each users' clinical and demographic assessment.



### Online Community

Active communities that connect veterans facing and overcoming the same challenges.

# Outcomes from 12 months and the VHA’s cohort of 6,900 veteran users not receiving ongoing VA care

During its first year of delivery with the Veterans Health Administration, VetsPrevail achieved tremendous engagement with veterans—as noted, none of whom were previously receiving care from the VHA’s extensive mental health services. 6,900 of these veterans enrolled in VetsPrevail during a one year period (capped enrollment), with 85,000 visits to the online community, 20,400 questions and answers from users, 2,800 online peer coaching sessions. Additionally, veterans’ stigma severity scores improved by an average of 2 points post-treatment as measured by their pre- treatment baseline assessments, demonstrating VetsPrevail’s capacity to reduce stigma for veterans in seeking mental health services.

Program participants can fall into one of three ‘core symptom’ cohorts: depression, anxiety and PTSD. For this analysis, we will focus on those participants in the depression cohort for with the VHA dataset is largest. During their baseline assessments, 2,269 of the veterans demonstrated symptoms for depression above the clinical threshold (11 on PHQ-9 scale, a conservative cut-off score) and were triaged into personalized programs targeting depression symptom mitigation and resilience building. Follow-up assessments of VetsPrevail users after twelve weeks showed that 36% of users decreased their symptoms of depression enough to fall below the threshold for clinically significant symptoms of depression. <sup>14</sup>



6,900 Veterans

6,900 veterans were provided a personalized VetsPrevail program, including 2,269 who showed signs of clinical depression.



85,000 Online Community Visits

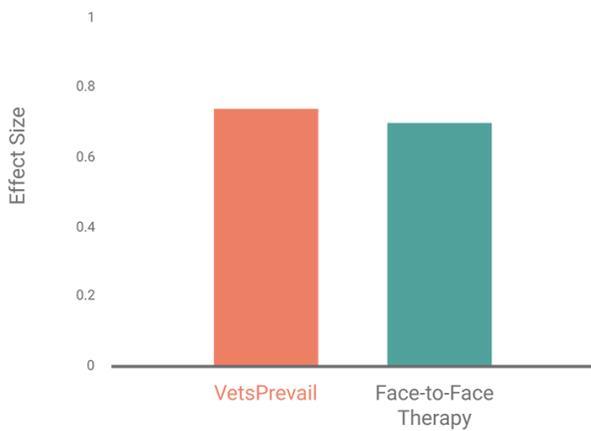
VetsPrevail’s online community recorded over 85,000 unique visits from vets as well as 20,400 questions and answers discussed.



2,800 Peer Coaching Sessions

VetsPrevail peer coaches supported vets during 2,800 online coaching sessions.

### Effectiveness of VetsPrevail vs. Face-to-Face Therapy in Treating Mild to Moderate Depression



Source: Cuijpers P., Berking M., Andersson G., Quigley L., Kleiboer O. A., & Dobson K. S. (2013). A meta-analysis of cognitive behavior therapy for adult depression, alone and in comparison to other treatments. *Canadian Journal of Psychiatry*, 58, 376-385

Comparing the effect sizes of depression symptom reduction between treatment modalities, i.e., VetsPrevail vs. face-to-face therapy, allows the magnitude of the results to be understood. The effect size of reduction in depression symptoms of the one year veterans cohort was ( $|d| = 0.74$ ) which is equivalent to the effect of traditional face-to-face treatment on the reduction of depression symptoms ( $d = 0.71$ )<sup>15</sup>, both of

which are considered moderate effect sizes. This was with the results achieved in the latest VetsPrevail clinical trial in which a reduction of depression symptoms demonstrated a moderate effect size ( $d = 0.56$ )<sup>16</sup>.

During its work with the VHA, VetsPrevail demonstrated a consistent ability to engage reluctant care seekers and then maintain that engagement so that clinically significant outcomes can be achieved. The outcomes of a randomized control trial conducted by Rush University Medical Center with funding from Bristol Myers Squibb Foundation were consistent with those achieved during the past 12 months of VetsPrevail delivery to 6,900 veterans.

## The VA uses VetsPrevail to deliver clinically effective care

The scope of the problem the VA faces with respect to mental health among veterans is simply immense. The direct cost of treating depression quickly adds up with assessments, face-to-face therapy visits, and medications. Indirect costs such as absenteeism, presenteeism, and comorbid conditions only exacerbate the enormous financial strain posed by mental health issues, and depression specifically. A recent RAND report commissioned by the VA to evaluate its mental health programs found that utilization of these direct services are high among service members. Within the entire study population 71% of veterans received at least one psychosocial visit and 72% were given a 30 day prescription for psychopharmacotherapy. When isolating these same figures to veterans experiencing depression, these rates were even higher, with 82% receiving psychosocial visits. Additionally, 89% of veterans diagnosed with depression received psychopharmacotherapy treatments services during the study period, 17% higher than the general veteran study population.<sup>17</sup>

The costs of all VA mental health services totaled \$12 billion with \$3.4 billion accruing from inpatient costs and \$7.4 billion from outpatient costs. The cost of medical treatments for the average veteran participating in the study was \$13,566 per year, a large proportion related to mental health treatment. These findings were compared to a non-veteran cohort that accrued an average cost of \$5,090 per year,<sup>18</sup> illustrating the high cost associated with veteran mental health treatment and the need for cost-effective services. Specifically narrowing in on the veteran cohort diagnosed with depression, their total costs averaged \$14,402 per veteran in fiscal year 2008. This figure puts treatment for depression in the top five most costly services for mental health utilization to the VA.<sup>19</sup>

Additionally, Watkins and colleagues found that less than 30% of veterans were receiving treatment that qualified as evidenced-based practice at the VA, such as CBT for major depressive disorder. Evidence-based practices comprise treatments of which there is empirical support for the relationship between service delivery and improved mental health outcomes. Providing evidence-based care has not only proven to be cost-effective, but also shown to improve patient quality of life.

VetsPrevail provides the opportunity for the VA to assimilate one of the most well researched evidence based treatments, CBT, in an accessible way for veterans in need. VetsPrevail's clinical trial results and real world data from 6,900 veteran users demonstrated that the program's effectiveness is equivalent to traditional face-to-face interventions for depression. However, VetsPrevail is provided to the VHA for a tiny fraction of the cost of face-to-face CBT therapy, which is estimated by a report from the US Department of Veterans Affairs to cost \$3,702 per year on average.<sup>20</sup>

## VetsPrevail generates \$3.7m in savings for the VA

Based on the study, the one year ROI for the VHA's investment in VetsPrevail to care for untreated veterans struggling with depression was approximately 14.8x. This result was achieved due to the fact that VetsPrevail was provided to 2,269 veterans who showed symptoms of clinical depression during 2013 but were not otherwise seeking care, and 1,031 completed enough of their VetsPrevail program to achieve a clinical effect equivalent to traditional therapy. For the cohort of 1,031 veterans, VetsPrevail saved the VA approximately \$3.7m relative to the cost of traditional face-to-face interventions for depression (and achieved similar clinical effects).



The Return on Investment  
We Generated for the VA

It is important to point out that this conservative analysis ignored the indirect costs of depression, like comorbid health conditions and the long-term costs of untreated mental health issues that are very real and many times more costly than \$3,702.

Given the cost savings achieved and the scalability of Prevail Health's technology platform, which was built in partnership with the National Science Foundation to serve large numbers of users, it is easy to understand why the VA sees The VetsPrevail program as an important tool in their struggle to provide timely access to quality care for all the nation's veterans.

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