

**Proof of Concept:**

# **Veteran Suicide**

August 2022



*“High suicide rates mark the failure of the U.S. government and society to manage the mental health costs of our current conflicts.”*

*“ENODO’s Proof-of-Concept delivers in-depth understanding of suicide ideation, based on the voices of high-risk veterans.”*

## BACKGROUND

In January 2019 ENODO Global launched its [Veterans Suicide Prevention Program \(VSPP\)](#). The program was designed to identify high-risk veterans and interdict potential suicides. Over the next nine months, ENODO representatives met with the head of the Veterans Administration (VA), representatives from the President’s Roadmap to Empower Veterans and End the National Tragedy of Suicide (PREVENTS) task force, and numerous non-profits and private sector organizations to identify funding for a six-month pilot project. ENODO was unable to identify a resource sponsor and the initiative was put on hold.

## OVERVIEW

Since 2019, veteran suicide-related deaths have increased at a greater rate than that of the general U.S. population and are the second-leading cause of death for post-9/11 veterans, accounting for 22.3% of all deaths. A [2021 report](#) found that 30,177 active-duty personnel and veterans who served in the military after 9/11 have died by suicide. And despite hundreds of millions of dollars spent each year and the proliferation of veteran-related mental health initiatives, suicide rates among veterans continue to increase.

Recent engagements with the Wounded Warrior Project (WWP) and the Veterans Experience Office (VEO) identified gaps in current initiatives and the necessity for ENODO to rejoin the fight. Based on a review of existing programs and initiatives, changes in the culture surrounding veteran suicide, and the significant increase in the volume and dissemination of social media discussions related to suicide, ENODO designed a Proof-of-Concept to deliver a viable solution to optimize existing efforts.

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## PROOF OF CONCEPT

ENODO's Proof-of-Concept expands on the original design of VSPP in order to understand the cause and proliferation of suicide ideation, identify high-risk veterans, and interdict potential suicides. It delivers data-driven insights based on the voices of veterans that can be used to augment existing programs and reduce the number of suicides among veterans. The Proof-of-Concept uses advanced data analytics, social listening tools, and machine learning to isolate the identity, narratives, worldviews, sentiment, and logics of appropriateness that shape veteran's perceptions and trigger their behaviors (i.e., depression, self-harm and suicide).

The Proof-of-Concept uses a customized data analytics platform to collect information from commonly used social media platforms on topics and discussions related to veteran suicide. Analysts examine the information environment to identify suicide-related topics, events, and discussions. Discord, Craigslist, Reddit, and YouTube were chosen for the Proof-of-Concept based on previous reports and analysis for the USAF and USMC. These platforms contain the highest volume of content (e.g., explicit discussions) and rich contextual information (e.g., slang, dialects, emojis, emoticons, etc.) regarding suicide.



*"Honestly, I completely understand why veterans get out and decide to kill themselves after a few years...After countless horrible exchanges with the VA about claims or help that is never going to come it is literally just inevitable death by 1000 bureaucratic paper cuts..."*

*"What is it about suicide that so many veterans DO choose it, and is there REALLY anything the VA or any other government agency or entity can do to help Veterans change their perspective and their life so that they want to stay alive and look at their life in a more positive, meaningful way?"*

## PROOF OF CONCEPT

The platform collects open-source information from online discussions that include chat groups, sub-Redditts, discussion forums, YouTube channels, responses to op-eds, comments on blog sites, discussion threads, and key influencers. It measures impressions, comments, likes, and shares to quantify and compare the number, periodicity, and type of discussions across each platform. Sentiment analysis tools are applied to discussions to uncover veterans' experiences and perceptions about suicide in near real-time. Sentiment is measured over time to identify changes, patterns, and anomalies in perception. Analysts apply machine learning and narrative analysis tools to identify prominent narratives, unique terms, and phrases to uncover pervasive narratives that influence veteran's beliefs about suicide.

The platform pinpoints suicide related discussions and identifies high-risk veterans that are actively engaged on social media. Analysts monitor the online behavior and characteristics of high-risk veterans that display suicide ideation through their discussions. Discussions are measured by periodicity and intonation to reveal the Social Risk factors that trigger potential suicide. Veterans that expresses suicidal inclinations or display suicidal tendencies are monitored to determine their level of severity. If the veteran is assessed to be at immediate risk of suicide, the veteran's identity is provided to local authorities and the VA.



At the completion of the Proof-of-Concept, analysts will generate a comprehensive report that details key finding and provides recommendations to optimize existing programs and increase the scope of future initiatives. The report will be shared with its partners, the Veterans Administration, Wounded Warrior Project, and other agencies and organizations that support veteran suicide efforts. Key findings and recommendations will:

- Enable stakeholders to understand and address the root causes of veteran suicide through the voices of veterans themselves
- Identify high-risk veterans discussing suicide on social media platforms before their most critical moments
- Provide broader insights on suicide ideation that enable stakeholders to reduce veteran suicide rates
- Identify common narratives across different social media platforms to reveal the identity, world views, and logic of appropriateness of high-risk veterans
- Determine ways to increase positive engagements with high-risk veterans that align with their identity
- Identify a Master-narrative and Sub-narratives to counter suicide ideation

Future programs will include passive detection, expand to over 20 social media platforms, and include blogs, RSS feeds (e.g., local news sites that have a higher concentration of reports on veteran suicides), and other open-source outlets that contain discussions involving veterans suicides. In addition, analysts will apply IP masking, employ Virtual Private Networks (VPNs), and the search the dark web to identify high-risk veterans that visit websites and join chat groups and discussion threads. Passive collection enables analysts to identify high-risk veterans that do not otherwise actively engage in social media.

*"Can we just get some god damn suicide prevention for veterans."*



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