



One Death Is Too Many Together, We Can Do Better

Executive Summary

Operation Deep Dive™ (OpDD), a former service member (FSM)¹ suicide and self-injury mortality (SIM)² study encompassing eight states and five years of death data corroborated by the Department of Defense (DoD), indicates that FSMs take their own lives each year at a rate approximately **2.4 times greater** than previously reported by the Department of Veterans Affairs (VA). OpDD™ data analytics was able to identify FSMs with the greatest probability of taking their own life. This interim report highlights the need to expand data sets to include additional states and the VA, and jointly identify suicide and SIM prevention efforts for FSMs. The implications of the data for prevention analysis and prevention application raise awareness to help prevent FSMs from taking their lives because **“Together, We Can Do Better.”**

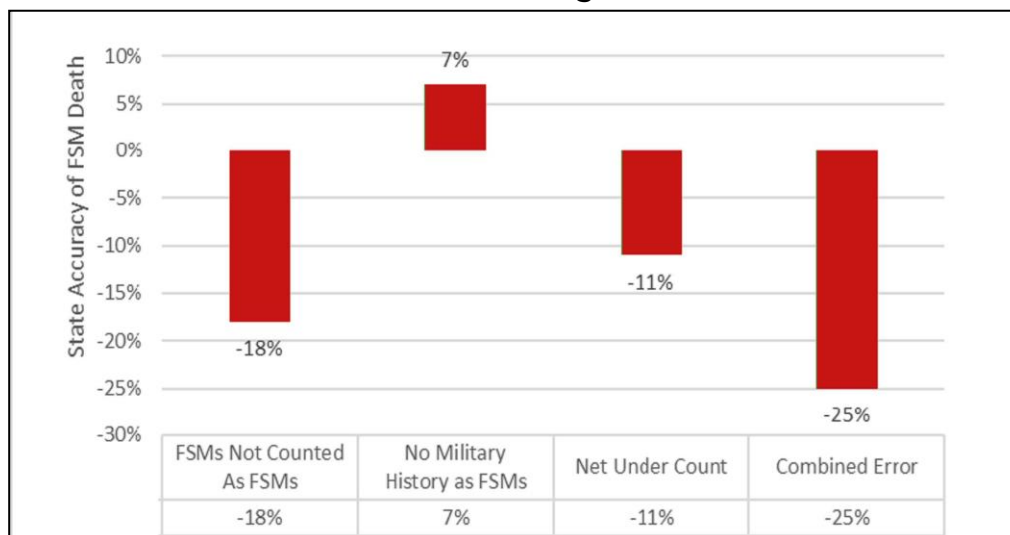
About Operation Deep Dive™

- **America's Warrior Partnership (AWP)** has contracted with the University of Alabama to obtain state data. In phase two, AWP has contracted with Duke University to analyze state-provided death data, coordinate with DoD to corroborate military affiliation, and identify commonalities of the person, military service, and their death. This first phase of OpDD™ was funded by Bristol Myers Squibb Foundation.
- OpDD™ has examined five years of FSM and civilian death data from **eight states**: Alabama, Florida, Maine, Massachusetts, Michigan, Minnesota, Montana, and Oregon.
- DoD data focused on male and female FSMs between the ages of 18-64. This population provides the greatest detail of the military service experience and is validated by DoD.³
- OpDD™ used the definition of SIM cited by the CDC and NIH as accidents or undetermined deaths aligned with self-harm/suicidal behavior, which have been attributed predominantly to overdose deaths.

Major Findings

- States undercount FSMs deaths at a combined error rate of 25%
 - States undercounted FSMs status 18% of the time and counted non-FSMs as FSMs 7% of the time.

State and Federal Under Counting of FSMs in 2014-2018



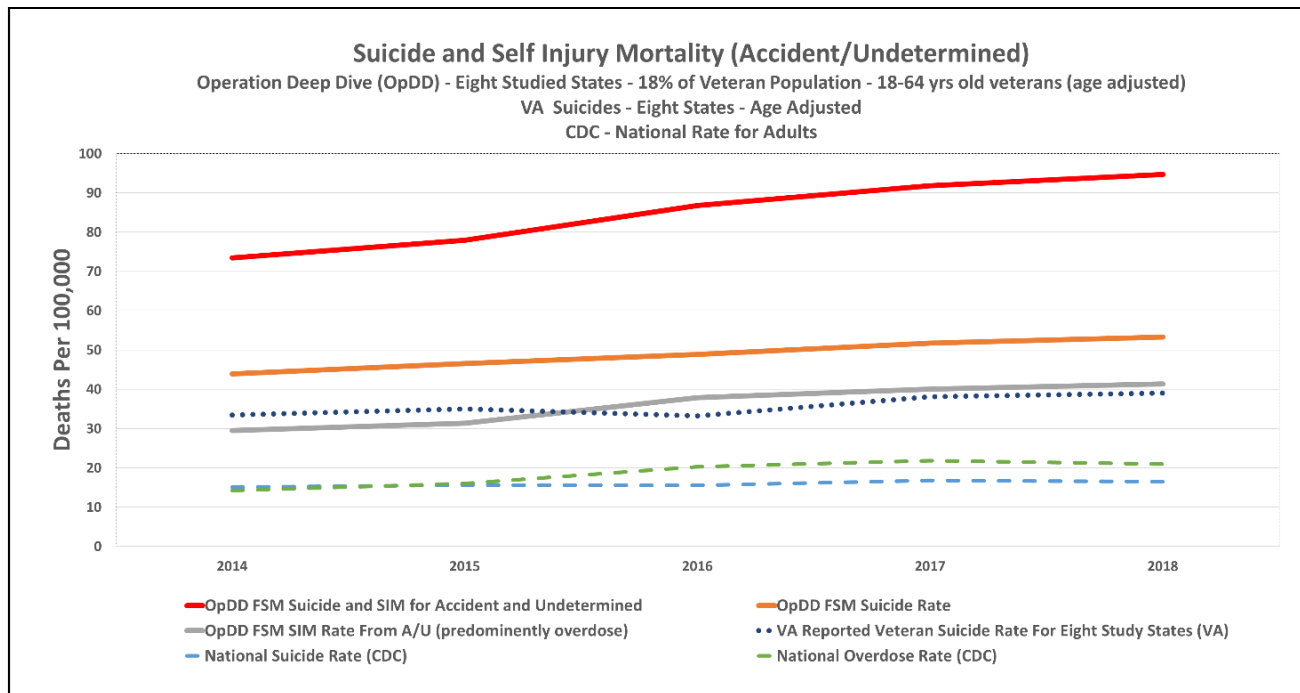
¹ Former Service Member encompasses everyone who served in the Active, National Guard, or Reserve forces who had active-duty service and activated for federal service via deployments and duration which may make them eligible for US Department of Veterans Affairs services. Since Dishonorable Discharge only accounted for 0.3% of all death records this was not statistically significant in the outcomes.

² Rockett, I. R., Lilly, C. L., Jia, H., Larkin, G. L., Miller, T. R., Nelson, L. S., & Caine, E. D. (2016). Self-injury mortality in the United States in the early 21st century: A comparison with proximally ranked diseases. *Jama Psychiatry*, 73(10), 1072-1081.

³ Due to limitations of the Department of Defense records prior to 1971, the DoD only can verify FSMs who served from 1971 onwards. The study, therefore, limited decedents to ages 18-64 years to align with census FSM population

Major Findings (Continued)

- OpDD™ identified a 37% greater suicide rate than reported by VA for years 2014-2018. The difference in the data is likely due to undercounting of FSMs deaths and the greater specificity of the decedent's demographics, military experience, and death details available to OpDD™.



- OpDD identified that the number of suicides represented in the eight states (18% of US veterans), are 1.37 times greater than reported by the VA from 2014-2018. If these eight states and age adjustment represented a national rate:
 - Approximately **24 FSMs** die per day by suicide (determined by coroner or medical examiner) compared to the VA's 2014-2018 average of 17.7 veteran suicides per day.
 - Approximately **20 FSMs** die per day by Self-Injury Mortality (SIM)– previously listed as accidents/undetermined – over 80% are coded as overdose deaths.
 - If these eight states collectively represented the national rate, the combined death rate would be at least **44 FSMs** per day which is 2.4 times higher than the VA suicide rate.
- OpDD analysis identified military service experience characteristics to refine the identification of FSMs with the highest probability of taking their lives.
 - The longer someone has served in the military, the lower their probability of taking their own life is 2% for every year served.
 - Those who served in the military for less than three years were at greatest risk for suicide/SIM.
 - Receiving a demotion during military service increased the FSM's odds of dying by suicide/SIM by 56%.
 - FSMs from the Coast Guard were most likely to die from suicide/SIM, followed by Marine Corps, Army, Navy, and Air Force.

Major Findings (Continued)

- OpDD™ analysis exposed lifestyle experiences to refine the identification of FSMs with the highest probability of taking their own lives.
 - In general, gender and race diversity were not associated with increased odds of suicide/SIM. Most FSM suicides and SIM were male and white.
 - Local and state communities differed for at-risk demographics and specific areas of concern depending on the characterization of FSMs in the community.
 - Living with a partner decreased the odds of suicide/SIM by nearly 40%.
 - Data indicate that FSMs are at a higher risk of dying from suicide/SIM or natural causes such as heart disease or cancer before age 64 than those who never served in the military.

Recommendations

- **SIM must be included in any analysis of FSM and veteran death.**
- **Improvements are needed at the local, state, and national levels regarding death reporting:**
 - Data standardization and the use of ICD codes regarding suicide and SIM would improve insights.
 - Coroners and Medical Examiners need better funding with standardized tools and approaches for accounting for FSM deaths.
 - DoD and the VA should make available a tool for coroners/medical examiners to validate military service as a part of the death record.
- **VA must share data to fill in important gaps in OpDD™ data**
 - Incorporating other sources of data, such as VA health care and benefits, will improve the success of prevention approaches.
 - Integrating identified state death data with military service data enables the nation, states, and counties to develop impactful/measurable suicide/SIM prevention approaches.
- **States must make death data available, with proper controls, for research purposes**
 - More state data are needed for OpDD™. By participating in OpDD it will help the states and counties reduce FSM death.
 - This can be used to effectively identify those at higher risk. Increased participation by states will provide further details and data accuracy to assist in greater specificity of those most at-risk.

Recommendations (Continued)

- **One-size-fits-one approach is needed to prevent premature non-natural death.** Former service member suicide and SIM methods of death differ significantly from state to state and from community to community.
- **Prevention strategies must begin at the community level by holistically** focusing on housing, meaningful employment, financial security, relationships, purpose, physical health, and mental well-being. Solely focusing on the mechanism of death does not address the root cause of suicide/SIM.

Next Steps for Operation Deep Dive™

- AWP moved OpDD™ to **Duke University** in order to expand the data set over the next four years and develop strategies that can be used at the national, state, and county levels to prevent FSM deaths.
- Increase the number of states sharing data and participating in OpDD™
- Incorporate US Department of Veterans Affairs data into OpDD™
- With a larger data set, further analyze the cause of death in relationship to:
 - Years of military service
 - Time since discharge from military service
 - Characterization of discharge
 - Military Service, Specialty, and Unit of Assignment
 - Military deployment history
 - Incidents occurring during military service (e.g., MST, trauma, or exposure)
 - Protective factors of those who transition in the National Guard or Reserve prior to death
 - Services received from the Department of Veterans Affairs
 - Community services available
- Work with government and non-government stakeholders to use OpDD™ findings to help prevent FSM suicide/SIM.

For more information regarding study design, methodology, data, and limitations, please refer to the [Methodology Report](#).