

DoD SER

Department of Defense Suicide Event Report Calendar Year 2018 Annual Report



The estimated cost of this report or study for the Department of Defense is approximately \$51,000 for the 2019 Fiscal Year. This includes \$800 in expenses and \$51,000 in DoD labor.

If you or anyone you know are experiencing thoughts of suicide, please reach out for help immediately.



- Call 800-273-8255. If you're a service member or veteran, press 1 to talk to a qualified Department of Veteran's Affairs (VA) responder.
 - In Europe, call 00800 1273 8255 or DSN 118
 - In Korea, call 0808 555 1188 or DSN 118
 - In Afghanistan, call 00 1 800 273 8255 or DSN 111
- Start a confidential online chat session at www.VeteransCrisisLine.net/chat.
- Send a text message to **838255** to connect to a VA responder.
- If you are deaf or hard of hearing, you can connect through chat, text, or teletypewriter (TTY).

The Calendar Year 2018 DoDSER Annual Report

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Executive Summary

This report presents data collected by the services about deaths by suicide and suicide attempts among service members during calendar year 2018 (CY18). The first part of the report provides an analysis of current and historical suicide mortality rates for the active, reserve, and National Guard components of the U.S. Air Force, Army, Marine Corps, and Navy. The second part of the report describes the demographic and contextual factors from active-component suicide event forms submitted to the Department of Defense Suicide Event Report (DoDSER) system. The third part of the report describes the demographic and contextual factors from reserve-component suicide event DoDSER forms and is inclusive of all duty statuses. The inclusion of all duty statuses was first fully implemented in CY18.

Presented below are key results from CY18.

CY18 Suicide Mortality Rates

There were 325 deaths by suicide identified among active-component service members. The suicide mortality rate was 24.8 deaths per 100,000 population.

The suicide mortality rates for each active-component service were as follows:

- Air Force: 18.5 suicides per 100,000 population
- Army: 29.5 suicides per 100,000 population
- Marine Corps: 31.4 suicides per 100,000 population
- Navy: 20.7 suicides per 100,000 population

The CY18 suicide rate for the reserve component, combined across all military services and regardless of duty status, was 22.9 suicides per 100,000 population.

The CY18 suicide rate for the National Guard component, combined across the Air and Army National Guard and regardless of duty status, was 30.6 suicides per 100,000 population.

Suicide Mortality Rates Over Time

The annual suicide mortality rates for the active and reserve components demonstrated increases from CY11-CY18. In contrast, the annual suicide mortality rates for the National Guard component did not increase from CY11-CY18.

There was evidence of an increase in the suicide mortality rate from CY11-CY18 for the active components each of the services. This evidence was strongest for the Air Force and the Marine Corps since the 95% confidence intervals for the trend analysis excluded zero (the value indicating no change). In contrast, the 95% confidence intervals for the Army and Navy included zero, which means that evidence of an increasing trend was less certain.

Expected Suicide Mortality Rates Given U.S. Population Data

The CY17 U.S. suicide rate (most recent CY available) for adults aged 17-59 (the comparable age range of the military population) was 18.2 per 100,000 individuals. Note that the U.S. population from which this rate is derived contains civilians as well as current and former military service members. Also note that, even with the age restriction, the military population is

younger and has a higher percentage of males than the U.S. adult population. Both of these characteristics are associated with suicide mortality rates.

After accounting for differences in age and sex between the military and general U.S. populations, the CY18 suicide mortality rates for both the active and reserve components were statistically no different from the CY17 U.S. adult population rate. In contrast, the CY18 suicide mortality rate for the National Guard component was statistically significantly higher than the CY17 U.S. adult population rate.

The CY18 suicide mortality rates for the active component populations of the Air Force, Marine Corps, and Navy were not statistically significantly different from the CY17 U.S. population rate. The CY18 suicide mortality rate for the active component population of the Army was statistically significantly higher than the CY17 U.S. population rate.

All of the statistically significant trends in the military rates were consistent with the trend in the U.S. adult population rates for CY11-CY17.

DoDSER Data Summary

- Personal firearm use was the most common method of injury in suicide DoDSER forms, accounting for 66.5 percent of all CY18 suicides.
- Drug and/or alcohol overdose was the most common method of attempted suicide in DoDSER forms, accounting for 59.0 percent of reported CY18 suicide attempts.
- Less than half (44.6 percent) of those who died by suicide in CY18 had a documented behavioral health diagnosis.
- Regardless of whether or not an individual voluntarily disclosed – or was assessed for – suicidal thoughts, feelings, or behaviors, less than half (44.6 percent) of individuals who died by suicide in CY18 made contact with the Military Health System (MHS) in the 90 days prior to death.
- The prevalence of various risk factors, protective factors, and other suicide event characteristics among suicide and suicide-attempt DoDSER forms in CY18 were consistent with those observed for previous years.

Chapter 1: Introduction

The DoDSER is the official reporting system for suicide events in the U.S. Air Force, Army, Marine Corps, and Navy. All cases of suicide death and suicide attempt among military service members are to be reported via the DoDSER.¹ The Psychological Health Center of Excellence (PHCoE), a division of the Defense Health Agency (DHA) Research and Development (J-9) Directorate, is responsible for the operation of the DoDSER, which has three primary elements:

1. A web-based **system** for collecting, organizing, and securing a standard set of case-level data for every service member who dies by suicide or makes a suicide attempt, regardless of military service, component, or duty status. The portal for the system is <https://dodser.t2.health.mil/>.¹
2. A data-collection **form** that guides trained MHS or command-level appointees on the data to assess and collect, as well as potential sources for required information. The content of the DoDSER form resulted from a collaborative process between the services, civilian and military experts, senior military leaders, and key stakeholders. The form is periodically revised to reflect the evolving needs of each service; it currently contains more than 500 data elements. Table 1 displays the DoDSER form's content areas.

Table 1. DoDSER form content areas

Content Area	Variables and Types of Variables
Personal Information	Age, sex, ethnicity, education, marital status
Military Information	Job code, duty status, permanent duty station
Event Information	Access to firearms, event method, event setting
Medical History	Behavioral health and medical history
Military History	Deployment history, disciplinary action
Personal History	Developmental and family history, current stressors
Narrative Summary	Information on data-collection strategy

3. An **annual report** of aggregated results generated from the data collected during a given calendar year. It is the culmination of collaborative efforts between PHCoE, the Suicide Prevention Program Offices of the Air Force, Army, Marine Corps, and Navy, the National Guard Bureau, the Defense Suicide Prevention Office, and the Armed Forces Medical Examiner System (AFMES).

To distinguish between these elements, the words *system*, *form*, or *annual report* appear after the DoDSER acronym throughout this document.

Interpretation of DoDSER Data

The reader is advised that this annual report's descriptions of specific risk and contextual factors must not be interpreted as underlying causes of suicide. It is not possible to determine whether any variable is a risk factor for suicide solely from the data presented in this report. Identifying such relationships requires formal research that includes individuals who do not die by suicide or engage in a suicide attempt. This type of research is outside the surveillance function of the DoDSER system.

The reader should also take into account the content area of any given DoDSER item when interpreting results. While this report reflects the best data available, several items address contextual factors that may not be precisely determined using data from existing databases or from evidence collected following the event. As a result, these types of items include response options of “No Known History” and/or “Cannot Determine.” In this report, these response options are combined with “No” responses to differentiate them from “Yes” responses that indicate the existence of validating data or evidence. See Appendix A for more information about DoDSER data processes.

Interpretation of a Suicide Mortality Rate

Interpretation of a suicide mortality rate requires some specialized knowledge. Specifically, suicide mortality rates and the interpretations around temporal and between-group comparisons are impacted by:

1. *Random error.* Rate data are subject to random variation. The number of events used in calculating the rate is directly related to precision, with rates based on larger numbers of events having more precision than those based on smaller numbers of events. The 95 percent confidence interval (CI) provides an approximation of the precision around a particular rate estimate.
2. *Volatility.* Rate data based on small numbers of events may show more movement up and down over time. In temporal comparisons (i.e., comparisons of a variable over time), volatility is addressed in two ways:
 - a. The use of a three-year average for historical comparisons. This average provides a more stable estimate with more precision than relying on any single-year data point as a reference.²
 - b. Trend modeling, which uses the data from several years to identify a pattern (e.g., linear or quadratic) to summarize change over time.
3. *Comparability.* Rate data for any single population provide a good description of event occurrence in that population. However, to make comparisons over time as well as between different populations, statisticians need to account for the size(s) of the population(s) and the proportions of relevant socio-demographic characteristics within the population(s). Age and sex were the two socio-demographic characteristics controlled for in this report’s formal suicide rate analyses.

Rate data analyses and associated results presented in this report attempt to account for the three considerations above. See Appendix B for more information on suicide mortality rates and the data analyses conducted for this report.

This report was completed and submitted for public release coordination on 17 July, 2019. The final report’s public release date was 24 April 2020.

References and Notes

1. For more information on the DoDSER System, see the System of Record Notice (April 15, 2016, 81 FR 22240) at <https://dpcl.d.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570683/edha-20-dod>
2. Montgomery DC, Jennings CL, Kulahci M. (2008). *Introduction to time series analysis and forecasting*. Hoboken, NJ: John Wiley.

Chapter 2: Suicide Mortality Rates

This chapter will present rates by component and service for CY16-CY18, examine rate trends from CY11-CY18, and compare standardized rates for the military and the U.S. general adult population.

An annual suicide mortality rate describes the number of deaths by suicide relative to the size of a population over a one-year period. The Department of Defense (DoD) rates for each calendar year include all service members, irrespective of duty status or DoDSER form submission status. AFMES provides the official counts of all deaths by suicide during a calendar year that were either confirmed or suspected as of March 31 of the following calendar year. The Defense Manpower Data Center (DMDC) provides a 12-month average end-strength denominator to AFMES, which then calculates the annual suicide mortality rates. More details about the methods for rate calculations are provided in Appendix B.

CY16-CY18 Suicide Mortality Rates by Component and Service

Table 2 displays suicide mortality counts and rates for each component and service for CY16-CY18. Tables 3-9 provide suicide mortality counts and rates across demographic categories for each component (all services combined) and for the active component of each service. Per DoD policy¹, suicide mortality rates are not reported for population groups with fewer than 20 events.

Table 2. Frequency and rate of death by suicide, CY16-CY18, by component and service

Component and Service	CY16		CY17		CY18	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Active	280	21.5	285	21.9	325	24.8
Air Force	61	19.4	63	19.6	60	18.5
Army	130	27.4	114	24.3	139	29.5
Marine Corps	37	20.1	43	23.4	58	31.4
Navy	52	15.9	65	20.1	68	20.7
Reserve ²	80	22.0	93	25.7	81	22.9
Air Force	10		11		3	
Army	41	20.6	63	32.1	48	25.3
Marine Corps	19		10		19	
Navy	10		9		11	
National Guard ²	122	27.1	133	29.8	135	30.6
Air	14		12		17	
Army	108	31.3	121	35.5	118	35.3

¹Unadjusted rate per 100,000 persons. Rates for subgroups with fewer than 20 suicides are not reported because of statistical instability.

²Rates for the Reserve and National Guard Components of the Selected Reserve include all service members irrespective of duty status.

Table 3. Frequency and rate of death by suicide, active component, Air Force, Army, Marine Corps, and Navy combined, CY16-CY18, by demographic characteristics

	CY16		CY17		CY18	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Total	280	21.5	285	21.9	325	24.8
Sex						
Female	20	9.7	16		21	9.7
Male	260	23.7	269	24.7	304	27.8
Race						
American Indian/Alaska Native	6		2		2	
Asian/Pacific Islander	9		13		23	31.2
Black/African American	33	14.7	28	12.5	42	18.8
White/Caucasian	215	24.2	220	24.8	234	26.1
Other/Unknown	17		22	21.7	24	23.7
Hispanic ethnicity						
Yes	29	15.7	41	20.6	50	24.1
No	245	23.0	236	22.8	265	25.7
Unknown	6		8		10	
Age						
17-19	14		14		9	
20-24	113	27.1	107	25.6	135	31.7
25-29	68	22.5	75	25.2	74	24.7
30-34	36	17.1	39	18.8	45	21.9
35-39	26	17.6	21	14.1	38	25.2
40-44	13		23	29.4	16	
45-49	8		6		7	
50-54	1		0		0	
55-59	1		0		1	
60-74	0		0		0	
Rank/grade						
Cadet/Midshipman	0		1		0	
E1 – E4	137	24.3	141	25.1	152	27.1
E5 – E9	106	21.3	125	25.2	144	28.5
Officer	33	15.7	16		28	13.2
Warrant officer	4		2		1	
Education						
Some high school	0		1		0	
Alternative high school certification	20	55.9	12		19	
High school graduate	189	24.1	208	26.7	214	27.3
Some college, no degree	18		15		12	
Associate's degree or technical certification	8		21	18.3	33	28.3
Four-year college degree	24	14.0	21	12.1	24	13.6
Master's degree or greater	19		7		16	
Unknown	2		0		7	
Marital status						
Never married	120	21.6	115	20.7	133	23.3
Married	135	19.5	141	20.7	179	26.5
Legally separated	2		0		0	
Divorced	22	44.1	28	46.7	13	
Widowed	1		1		0	
Unknown	0		0		0	

¹Rate per 100,000 persons. Categories with fewer than 20 events do not have a rate reported because of statistical instability.

Table 4. Frequency and rate of death by suicide, reserve component, Air Force, Army, Marine Corps, and Navy combined, CY16-CY18, by demographic characteristics

	CY16		CY17		CY18	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Total	80	22.0	93	25.7	81	22.9
Sex						
Female	4		6		8	
Male	76	26.7	87	30.8	73	26.5
Race						
American Indian/Alaska Native	1		0		2	
Asian/Pacific Islander	5		5		2	
Black/African American	7		9		16	
White/Caucasian	63	25.7	76	31.3	56	23.5
Other/Unknown	4		3		5	
Hispanic ethnicity						
Yes	7		14		13	
No	73	24.0	78	26.5	65	24.3
Unknown	0		1		3	
Age						
17-19	4		1		3	
20-24	26	35.4	33	46.2	29	41.8
25-29	25	33.2	22	29.7	27	38.0
30-34	10		13		8	
35-39	5		11		5	
40-44	4		5		5	
45-49	2		2		3	
50-54	1		6		1	
55-59	3		0		0	
60-74	0		0		0	
Rank/grade						
Cadet/Midshipman	0		0		0	
E1 – E4	44	30.3	56	39.3	49	35.8
E5 – E9	31	20.9	31	20.9	26	17.6
Officer	5		5		5	
Warrant officer	0		1		1	
Education						
Some high school	1		3		2	
Alternative high school certification	6		6		7	
High school graduate	59	29.5	62	32.2	59	32.2
Some college, no degree	2		3		1	
Associate's degree or technical certification	4		4		1	
Four-year college degree	6		13		5	
Master's degree or greater	2		1		3	
Unknown	0		1		3	
Marital status						
Never married	48	28.8	48	29.0	48	29.7
Married	28	16.5	38	22.5	29	17.5
Legally separated	0		0		0	
Divorced	4		7		3	
Widowed	0		0		0	
Unknown	0		0		1	

¹Rate per 100,000 persons. Categories with fewer than 20 events do not have a rate reported because of statistical instability.

Table 5. Frequency and rate of death by suicide, National Guard component, Air Force and Army combined, CY16-CY18, by demographic characteristics

	CY16		CY17		CY18	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Total	122	27.1	133	29.8	135	30.6
Sex						
Female	6		6		10	
Male	116	31.2	127	34.6	125	34.6
Race						
American Indian/Alaska Native	3		2		1	
Asian/Pacific Islander	7		2		2	
Black/African American	9		15		14	
White/Caucasian	100	28.1	113	32.0	110	31.5
Other/Unknown	3		1		8	
Hispanic ethnicity						
Yes	4		6		9	
No	118	28.7	127	31.4	125	31.9
Unknown	0		0		1	
Age						
17-19	10		8		10	
20-24	38	34.4	48	44.4	41	39.1
25-29	42	45.0	24	26.1	37	41.6
30-34	12		16		13	
35-39	6		16		16	
40-44	7		9		9	
45-49	4		8		7	
50-54	3		3		0	
55-59	0		0		2	
60-74	0		1		0	
Rank/grade						
Cadet/Midshipman	0		0		0	
E1 – E4	74	37.4	64	32.3	72	36.5
E5 – E9	39	20.3	57	30.4	54	29.4
Officer	8		11		9	
Warrant officer	1		1		0	
Education						
Some high school	4		2		3	
Alternative high school certification	13		15		16	
High school graduate	66	35.9	72	39.5	69	38.3
Some college, no degree	19		22	20.4	26	25.1
Associate's degree or technical certification	2		7		6	
Four-year college degree	15		11		11	
Master's degree or greater	1		3		2	
Unknown	2		1		2	
Marital status						
Never married	80	34.6	80	34.8	81	35.4
Married	37	19.4	40	21.3	48	25.9
Legally separated	0		1		0	
Divorced	5		11		5	
Widowed	0		1		0	
Unknown	0		0		1	

¹Rate per 100,000 persons. Categories with fewer than 20 events do not have a rate reported because of statistical instability.

Table 6. Frequency and rate of death by suicide, active component, Air Force, CY16-CY18, by demographic characteristics

	CY16		CY17		CY18	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Total	61	19.4	63	19.6	60	18.5
Sex						
Female	5		2		5	
Male	56	22.0	61	23.7	55	21.2
Race						
American Indian/Alaska Native	0		0		0	
Asian/Pacific Islander	0		2		3	
Black/African American	6		7		7	
White/Caucasian	52	23.2	49	21.5	43	18.7
Other/Unknown	3		5		7	
Hispanic ethnicity						
Yes	5		6		9	
No	55	20.7	56	21.5	49	18.7
Unknown	1		1		2	
Age						
17-19	4		1		2	
20-24	14		18		17	
25-29	17		25	30.9	19	
30-34	10		8		8	
35-39	9		4		9	
40-44	4		5		4	
45-49	3		2		1	
50-54	0		0		0	
55-59	0		0		0	
60-74	0		0		0	
Rank/grade						
Cadet/Midshipman	0		0		0	
E1 – E4	22	18.4	29	23.7	21	17.0
E5 – E9	27	20.6	27	20.3	33	24.5
Officer	12		7		6	
Warrant officer	0		0		0	
Education						
Some high school	0		0		0	
Alternative high school certification	0		0		0	
High school graduate	40	24.9	36	21.9	33	20.0
Some college, no degree	0		0		0	
Associate's degree or technical certification	6		18		16	
Four-year college degree	5		5		5	
Master's degree or greater	9		4		6	
Unknown	1		0		0	
Marital status						
Never married	27	22.7	22	17.6	20	15.4
Married	25	14.2	30	17.0	36	20.5
Legally separated	0		0		0	
Divorced	8		11		4	
Widowed	1		0		0	
Unknown	0		0		0	

¹Rate per 100,000 persons. Categories with fewer than 20 events do not have a rate reported because of statistical instability.

Table 7. Frequency and rate of death by suicide, active component, Army, CY16-CY18, by demographic characteristics

	CY16		CY17		CY18	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Total	130	27.4	114	24.3	139	29.5
Sex						
Female	10		6		7	
Male	120	29.6	108	27.0	132	33.0
Race						
American Indian/Alaska Native	3		0		1	
Asian/Pacific Islander	5		6		9	
Black/African American	18		15		18	
White/Caucasian	99	31.2	88	28.0	107	33.7
Other/Unknown	5		5		4	
Hispanic ethnicity						
Yes	16		19		18	
No	114	28.1	95	23.9	121	30.5
Unknown	0		0		0	
Age						
17-19	3		7		5	
20-24	50	35.5	48	33.7	57	39.0
25-29	34	32.0	21	20.1	32	30.0
30-34	19		14		18	
35-39	11		12		18	
40-44	8		10		6	
45-49	4		2		3	
50-54	0		0		0	
55-59	1		0		0	
60-74	0		0		0	
Rank/grade						
Cadet/Midshipman	0		0		0	
E1 – E4	61	29.3	61	29.4	76	36.9
E5 – E9	47	27.6	48	28.7	53	31.3
Officer	18		3		10	
Warrant officer	4		2		0	
Education						
Some high school	0		1		0	
Alternative high school certification	13		10		16	
High school graduate	77	30.1	80	31.7	87	34.3
Some college, no degree	16		12		9	
Associate's degree or technical certification	1		2		8	
Four-year college degree	13		9		11	
Master's degree or greater	10		0		7	
Unknown	0		0		1	
Marital status						
Never married	48	26.8	42	22.8	55	28.6
Married	66	24.4	61	23.4	79	30.9
Legally separated	2		0		0	
Divorced	14		10		5	
Widowed	0		1		0	
Unknown	0		0		0	

¹Rate per 100,000 persons. Categories with fewer than 20 events do not have a rate reported because of statistical instability.

Table 8. Frequency and rate of death by suicide, active component, Marine Corps, CY16-CY18, by demographic characteristics

	CY16		CY17		CY18	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Total	37	20.1	43	23.4	58	31.4
Sex						
Female	1		3		2	
Male	36	21.3	40	23.7	56	33.1
Race						
American Indian/Alaska Native	3		0		0	
Asian/Pacific Islander	2		3		5	
Black/African American	4		3		7	
White/Caucasian	26	17.8	35	23.9	43	29.1
Other/Unknown	2		2		3	
Hispanic ethnicity						
Yes	1		6		12	
No	36	24.3	37	25.2	46	31.6
Unknown	0		0		0	
Age						
17-19	4		4		2	
20-24	24	27.5	21	23.9	32	36.0
25-29	4		12		11	
30-34	1		3		7	
35-39	2		0		3	
40-44	1		2		2	
45-49	1		1		1	
50-54	0		0		0	
55-59	0		0		0	
60-74	0		0		0	
Rank/grade						
Cadet/Midshipman	0		0		0	
E1 – E4	23	21.2	27	24.9	29	26.7
E5 – E9	13		14		24	43.6
Officer	1		2		4	
Warrant officer	0		0		1	
Education						
Some high school	0		0		0	
Alternative high school certification	3		0		1	
High school graduate	32	21.2	41	27.1	52	34.0
Some college, no degree	1		0		1	
Associate's degree or technical certification	0		1		1	
Four-year college degree	1		1		2	
Master's degree or greater	0		0		1	
Unknown	0		0		0	
Marital status						
Never married	19		26	25.8	26	25.4
Married	18		15		29	37.8
Legally separated	0		0		0	
Divorced	0		2		3	
Widowed	0		0		0	
Unknown	0		0		0	

¹Rate per 100,000 persons. Categories with fewer than 20 events do not have a rate reported because of statistical instability.

Table 9. Frequency and rate of death by suicide, active component, Navy, CY16-CY18, by demographic characteristics

	CY16		CY17		CY18	
	No.	Rate ¹	No.	Rate ¹	No.	Rate ¹
Total	52	15.9	65	20.1	68	20.7
Sex						
Female	4		5		7	
Male	48	18.0	60	22.9	61	23.1
Race						
American Indian/Alaska Native	0		2		1	
Asian/Pacific Islander	2		2		6	
Black/African American	5		3		10	
White/Caucasian	38	19.1	48	24.2	41	20.3
Other/Unknown	7		10		10	
Hispanic ethnicity						
Yes	7		10		11	
No	40	16.4	48	20.6	49	21.7
Unknown	5		7		8	
Age						
17-19	3		2		0	
20-24	25	24.4	20	20.2	29	29.3
25-29	13		17		12	
30-34	6		14		12	
35-39	4		5		8	
40-44	0		6		4	
45-49	0		1		2	
50-54	1		0		0	
55-59	0		0		1	
60-74	0		0		0	
Rank/grade						
Cadet/Midshipman	0		1		0	
E1 – E4	31	24.4	24	19.5	26	21.2
E5 – E9	19		36	25.4	34	23.2
Officer	2		4		8	
Warrant officer	0		0		0	
Education						
Some high school	0		0		0	
Alternative high school certification	4		2		2	
High school graduate	40	18.6	51	24.2	42	19.7
Some college, no degree	1		3		2	
Associate's degree or technical certification	1		0		8	
Four-year college degree	5		6		6	
Master's degree or greater	0		3		2	
Unknown	1		0		6	
Marital status						
Never married	26	16.3	25	17.2	32	21.7
Married	26	15.6	35	21.1	35	21.1
Legally separated	0		0		0	
Divorced	0		5		1	
Widowed	0		0		0	
Unknown	0		0		0	

¹Rate per 100,000 persons. Categories with fewer than 20 events do not have a rate reported because of statistical instability.

Suicide Mortality Rates over Time

The age- and sex-adjusted suicide mortality rates for the active and reserve components demonstrated statistically significant increases in the linear trend analysis from CY11-CY18. The annual suicide mortality rates for the National Guard component did not show evidence of a linear increase from CY11-CY18. The annual and three-year moving average suicide mortality rates for the three components are presented in Figure 1. The CY18 suicide mortality rate for the active component was statistically significantly greater than the average for CY15-CY17 (the three-year average at CY17 depicted in Figure 1). The CY18 rates for the reserve and National Guard components were not statistically different from their respective three-year averages.

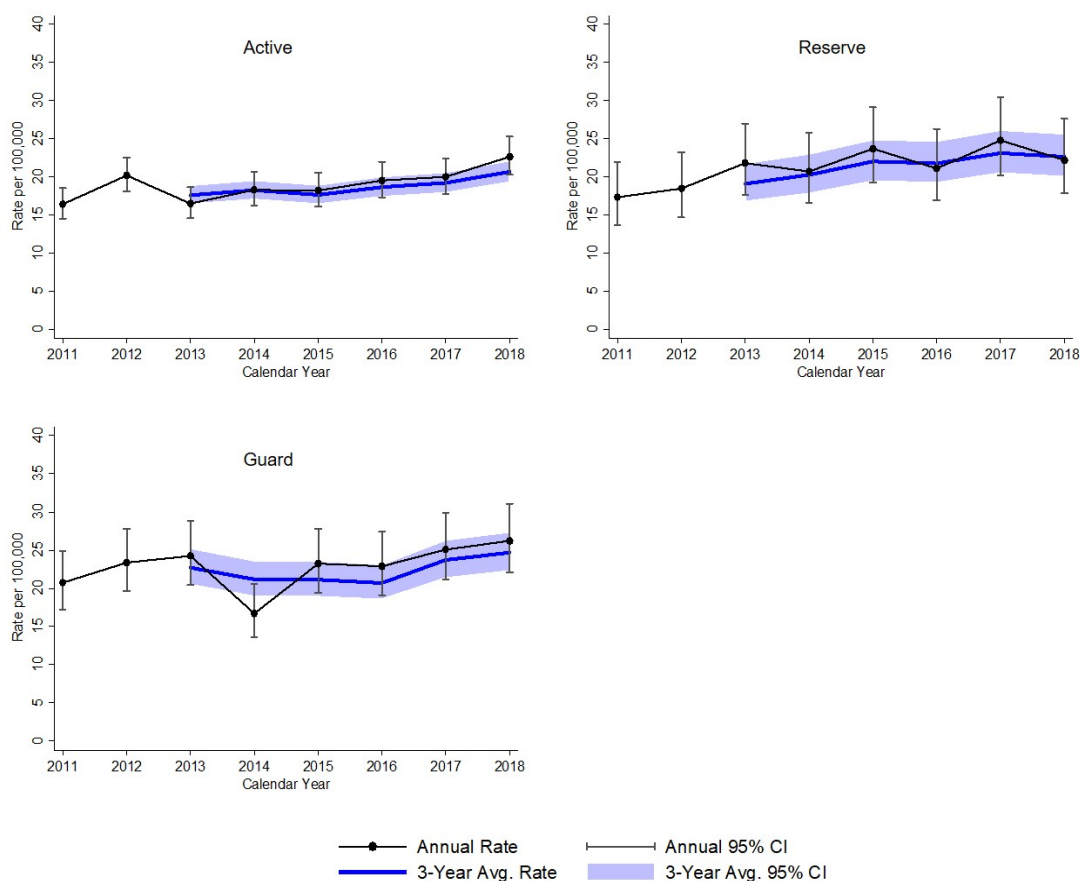


Figure 1. Adjusted annual and three-year moving average suicide mortality rates for the active, reserve, and National Guard components, CY11-CY18. Note: CI = Confidence Interval. All rates are adjusted for age and sex. The three-year moving average for each year with an estimate is the average of the rate for that CY and the two preceding CYs. For example, the 3-year average rate for CY13 is the average of CY11, CY12, and CY13

There were statistically significant linear increases in the age- and sex-adjusted suicide mortality rates for the active component populations of the Air Force and the Marine Corps from CY11-CY18. While the Army and the Navy showed increasing slopes for their rates, the changes were not statistically significant over this timeframe. The changes over time in the annual suicide mortality rates for the active component populations of the Air Force, Army, Marine Corps, and Navy are displayed in Figure 2. The CY18 suicide mortality rates for the Air Force, Army, and

Navy were not statistically significantly different from each service’s CY15-C17 average suicide mortality rate. The CY18 suicide mortality rate for the Marine Corps was statistically significantly higher than its CY15-CY17 average suicide mortality rate.

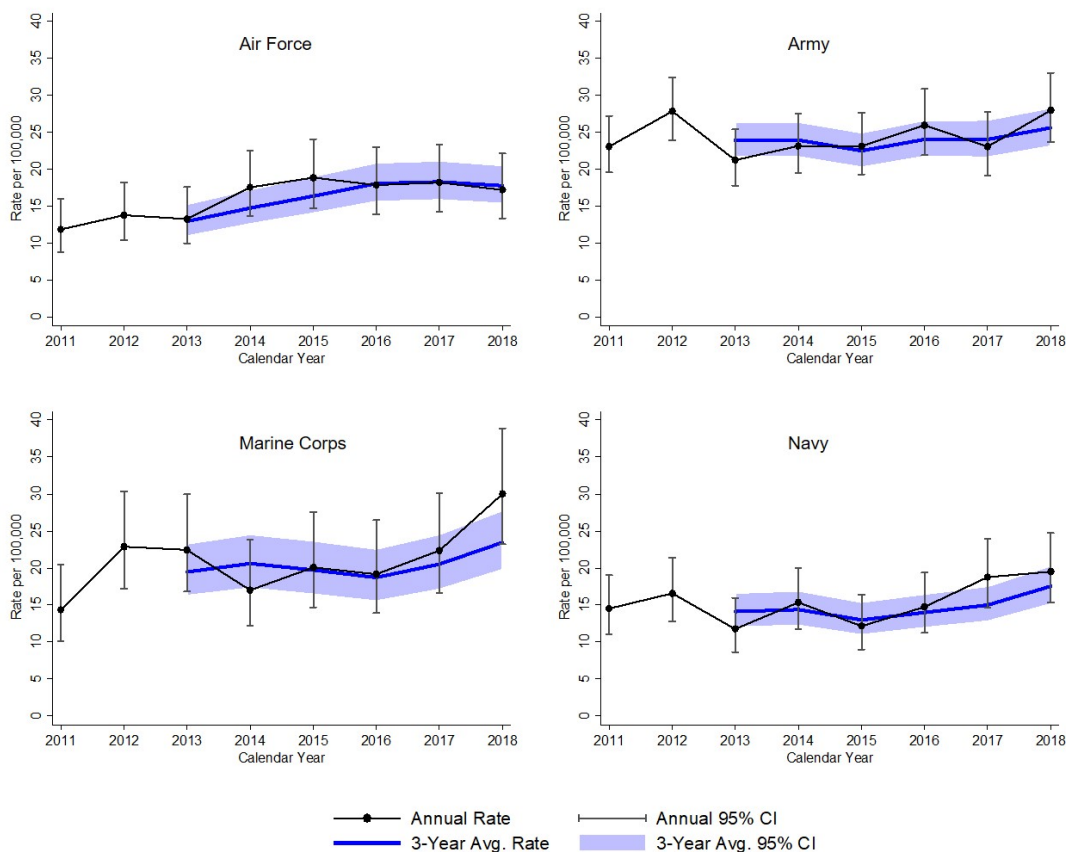


Figure 2. Adjusted annual and three-year moving average suicide mortality rates for the active component, by service, CY11-CY18. Note: CI = Confidence Interval. All rates are adjusted for age and sex. The three-year moving average for each year with an estimate is the average of the rate for that CY and the two preceding CYs. For example, the 3-year average rate for CY13 is the average of CY11, CY12, and CY13.

Comparisons of Military and U.S. General Adult Population Standardized Rates

The CY17 suicide mortality rate for the U.S. population, ages 17–59, was 18.2 deaths per 100,000 individuals². These are the most recent population data available. Note that this rate value is higher than the total U.S. population rate because the age range used for this report (17–59 years) has been restricted to make it more comparable to the age range of the U.S. military population. The total U.S. population suicide mortality rate contains individuals of all ages, including infants and children, who have a lower suicide mortality rate than adult populations. Excluding those age groups produces an adult population suicide mortality rate that is greater than the one reported for the total population.

The CY18 suicide mortality rates for the active and reserve components did not differ from the U.S. adult population suicide mortality rates for CY17 (Figure 3). This means that the observed

number of deaths by suicide in the active and reserve components was consistent with what would be expected given the age and sex composition of the military populations and the age- and sex-specific suicide mortality rates of the U.S. adult population. The National Guard component had a higher suicide mortality rate than expected from the U.S. adult population data (Figure 3).

In the previous section, statistically significant linear increases in suicide mortality rates from CY11-CY18 were identified for the active and reserve component populations. Given the similarity of standardized DoD suicide mortality rates in CY18 to expected values from the U.S. adult population (Figure 3), the observed increase in the DoD suicide mortality rate is consistent with changes in the US population as a whole.

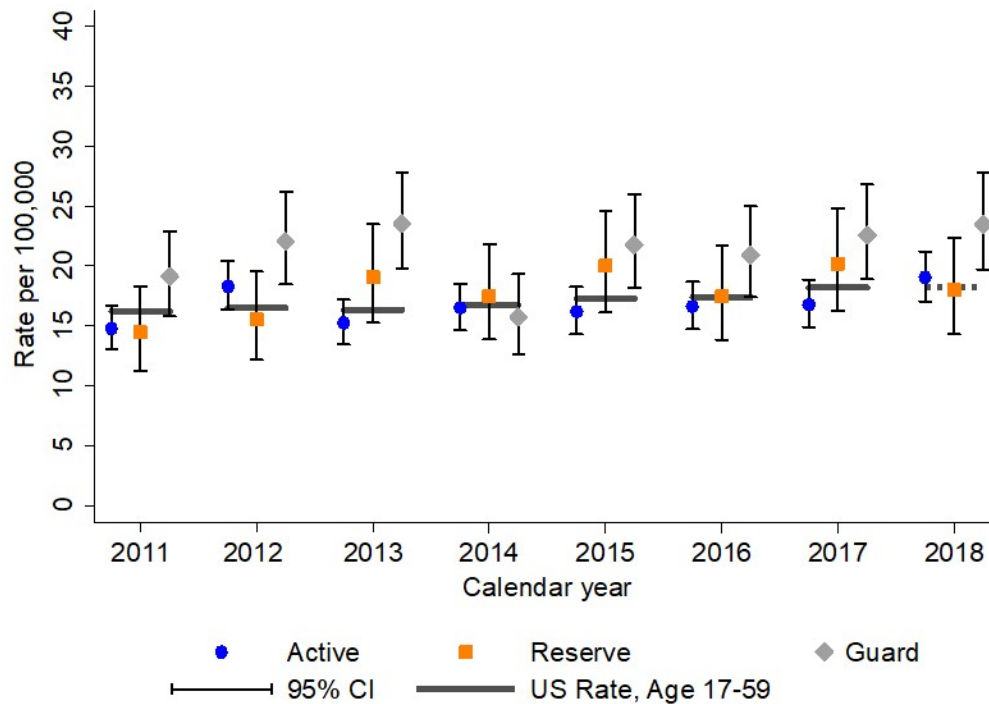


Figure 3. CY11-CY18 annual suicide mortality rates, by component, standardized to the CY11-CY17 U.S. adult population rate data. Note: the U.S. population data include data from civilians as well as current and former military service members. The U.S. population data for CY18 are the data for CY17, which are the most recent data available at the time of this writing.

The suicide mortality rates for the active component populations of the Air Force, Marine Corps, and Navy in CY18 were not statistically significantly different from expected values given the CY17 U.S. population rate data (Figure 4). The active component population of the Army experienced a higher suicide mortality rate than expected.

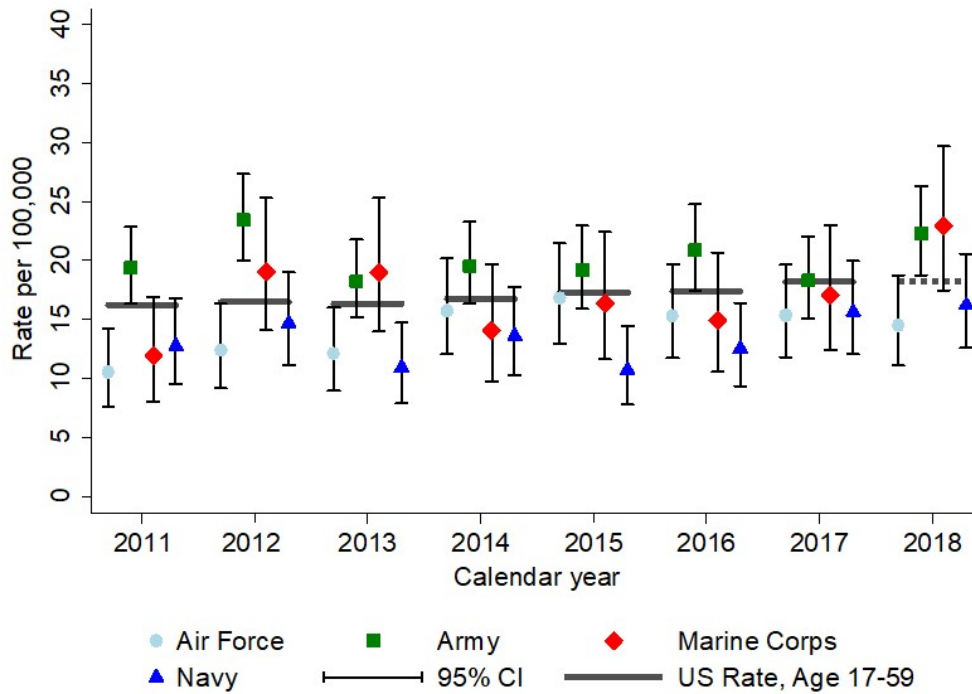


Figure 4. CY11-CY18 active component annual suicide mortality rates, by service, standardized to the CY11-CY17 U.S. adult population rate data. Note: the U.S. population data include data from civilians as well as current and former military service members. The U.S. population data for CY18 are the data for CY17, which are the most recent data available at the time of this writing.

References

1. Under Secretary of Defense for Personnel and Readiness Memorandum. (2014). *Standardized DoD Suicide Data and Reporting*. Washington, DC: Government Printing Office.
2. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. (2005). *Web-Based Injury Statistics Query and Reporting System (WISQARS)*. Retrieved from www.cdc.gov/injury/wisqars.

Chapter 3: DoDSER Summary - Joint Forces

Introduction

This chapter presents an overview of the combined Air Force, Army, Marine Corps, and Navy data for submitted active-component suicide and suicide-attempt DoDSER forms. The data tables for suicide and suicide attempt cases are presented separately. Data tables are organized by the following variable categories: demographic and military (Tables 10 & 11), suicide event characteristics (Tables 12 & 13), physical and mental health (Tables 14 & 15), and psychosocial and adverse experiences (Tables 16 & 17). Data tables contain joint data as well as data for each of the services. Variables of particular interest are presented in the text of this chapter and the following four service-specific chapters.

Suicide Mortality

There were 240 active-component suicide deaths confirmed by the AFMES for CY18 as of January 31, 2019. For inclusion in this report, a DoDSER form was required for submission for these events by March 31, 2019. A total 234 of these forms were submitted. An additional 44 events that were either confirmed by AFMES after January 31 or were still pending a final determination as of January 31 had DoDSER forms submitted in time for inclusion in this report. Hence, the total number of deaths described in the following tables and analyses equals 278.

Suicide Attempts

Over the course of CY18, DoDSER forms were submitted for 1,375 suicide attempts by 1,219 unique individuals.

History of Suicidal Behavior Reported in DoDSER

A total of six active-component CY18 suicides were associated with one or more previously reported suicide attempt(s) that occurred between CY10 (when attempts were first entered into the DoDSER system; CY08 for Army) and CY18. The median number of days between the most recent suicide attempt and the date of death was 41.

A total of 101 CY18 active-component suicide-attempt DoDSER forms were associated with one or more previous suicide attempt(s) recorded in the DoDSER system since CY10 (CY08 for Army). The median number of days between the most recently reported suicide attempt and the penultimate attempt reported was 61 days.

Demographic Characteristics

The most common demographic profile among suicide DoDSER forms corresponded to a non-Hispanic, white male aged 17-29; this group accounted for 38.9 percent of submitted forms. Female service members accounted for 6.9 percent of suicide DoDSER forms and 30.6 percent of suicide-attempt DoDSER forms.

Method of Injury

Firearm use was the most common (60.4 percent) method of injury identified in suicide DoDSER forms. The majority (92.3 percent) of the firearms used were personal possessions.

Relatively few firearm deaths (6.5 percent) resulted from the self-directed use of a military-issued firearm. There was no statistically significant difference between the proportion of active-component DoDSER forms in CY18 for which firearm use was the method of injury and the CY15-CY17 average.

For suicide-attempt DoDSER forms, drug and/or alcohol overdose was the most frequently reported method of injury (59.7 percent). In addition, other frequently reported methods of injury included trauma from a fall or a sharp/blunt object (16.7 percent) and hanging/asphyxiation (13.2 percent). The prevalence of trauma from a fall or a sharp/blunt object as the method of suicide attempt was statistically higher for CY18 as compared to the CY15-CY17 average. There was no statistically significant difference between the proportions of suicide-attempt DoDSER forms in CY18 for which drug and/or alcohol overdose was the method of injury and the CY15-CY17 average.

Behavioral Health History

Among suicide DoDSER forms, 45.3 percent had at least one current or past behavioral health diagnosis in their medical record. Adjustment disorders (21.9 percent), substance use disorders (21.6 percent), and mood disorders (19.1 percent) were the most common diagnostic categories. Among suicide-attempt DoDSER forms, 61.7 percent had at least one current or past behavioral health diagnosis in their medical record. Mood disorders (32.2 percent), adjustment disorders (24.1 percent), and substance use disorders (23.4 percent) were the most common diagnostic categories.

Figure 5 displays the prevalence of various diagnostic categories, previous self-harm, and the use of psychotropic medication in the 90 days prior to a suicidal behavior among active-component DoDSER forms submitted for CY18 and the three-year average for CY15-CY17. Among suicide DoDSER forms, there were no statistically significant differences between CY18 and the CY15-CY17 average on any of the variables examined. Among suicide-attempt DoDSER forms, there was one statistically significant difference between CY18 and the CY15-CY17 average for this variable set: a statistically significant reduction in the proportion of forms identifying any history of adjustment disorder.

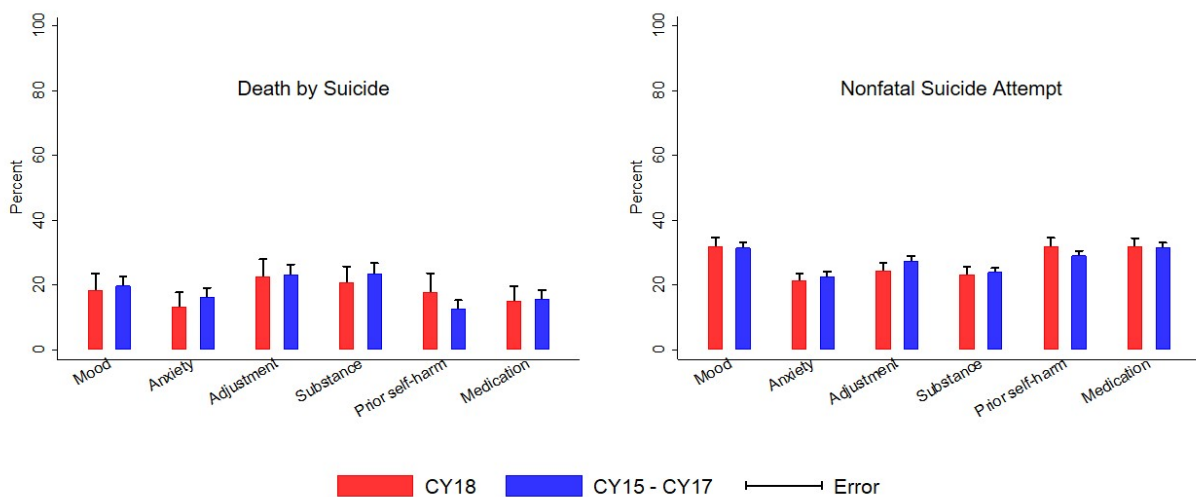


Figure 5. Percent of active-component DoDSER forms that indicated selected mental health factors, by event type, CY15-CY18.

Health Care Utilization

Regardless of whether or not an individual voluntarily disclosed – or was assessed for – suicidal thoughts, feelings, or behaviors, 52.9 percent of the service members who died by suicide in CY18 had been in contact with the MHS in the 90 days prior to death. The most common type of appointment was a general visit to a medical treatment facility (48.2 percent) and the second most common type was a mental health visit (30.2 percent). Outpatient mental health services were utilized in 29.5 percent of cases while inpatient mental health services were utilized in 9.0 percent of cases.

For reported suicide attempts, 62.4 percent of the DoDSER forms indicated contact with the MHS in the 90 days prior to the behavior. The most common types of appointments were general visits to a medical treatment facility (50.3 percent) and mental health visits (49.5 percent). Outpatient mental health services were utilized in 47.9 percent of cases while inpatient mental health services were utilized in 15.1 percent of cases.

Stressors

Among suicide DoDSER forms, relationship (39.2 percent), legal/administrative (32.4 percent), and work (18.7 percent) stressors within 90 days of the event were the most common stressors identified in CY18 (Figure 6). Similarly, among suicide-attempt DoDSER forms, relationship (38.5 percent), legal/administrative (29.5 percent), and work (31.5 percent) stressors were the most common stressors identified in CY18 (Figure 6). There were no statistically significant differences in the prevalence of these risk factors for either suicide or suicide-attempt DoDSER forms between CY18 and the three-year average for CY15-CY17.

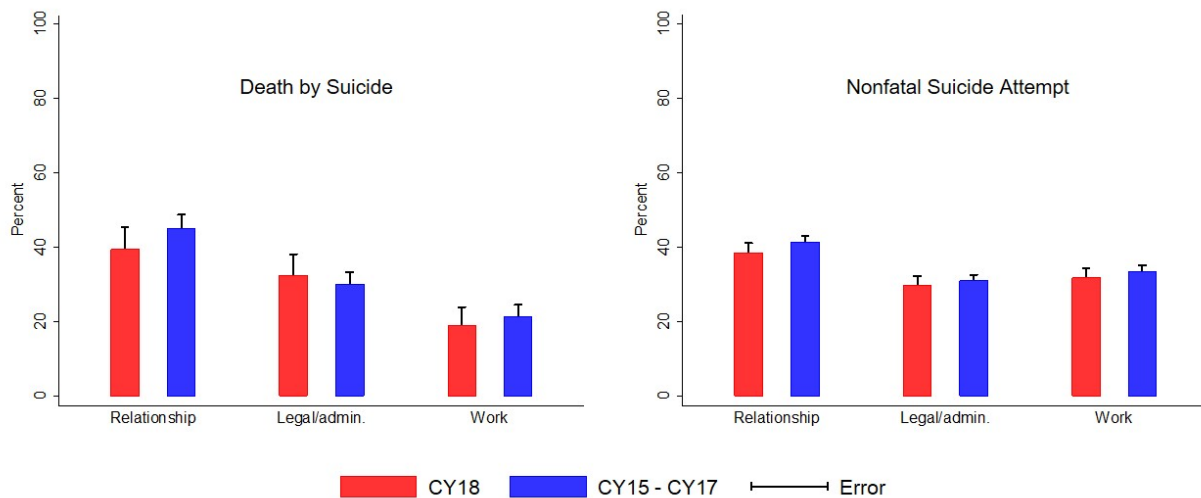


Figure 6. Percent of active-component DoDSER forms that indicated selected contextual stressors 90 days prior the event, by event type, CY15-CY18.

Table 10. Demographic characteristics, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sex										
Male	262	94.2	45	93.8	102	95.3	54	96.4	61	91.0
Female	16	5.8	3	6.3	5	4.7	2	3.6	6	9.0
Age										
17-19	7	2.5	2	4.2	4	3.7	1	1.8	0	0.0
20-24	120	43.2	15	31.3	44	41.1	32	57.1	29	43.3
25-29	60	21.6	14	29.2	25	23.4	10	17.9	11	16.4
30-34	39	14.0	5	10.4	15	14.0	7	12.5	12	17.9
35-39	31	11.2	7	14.6	13	12.1	3	5.4	8	11.9
40-44	15	5.4	4	8.3	5	4.7	2	3.6	4	6.0
45-59	6	2.2	1	2.1	1	0.9	1	1.8	3	4.5
Race										
American Indian/Alaska Native	1	0.4	0	0.0	0	0.0	0	0.0	1	1.5
Asian/Pacific Islander	20	7.2	2	4.2	7	6.5	5	8.9	6	9.0
Black/African American	35	12.6	6	12.5	12	11.2	7	12.5	10	14.9
White/Caucasian	198	71.2	33	68.8	84	78.5	41	73.2	40	59.7
Other/Unknown	24	8.6	7	14.6	4	3.7	3	5.4	10	14.9
Hispanic ethnicity										
Yes	45	16.2	9	18.8	13	12.1	12	21.4	11	16.4
No	233	83.8	39	81.3	94	87.9	44	78.6	56	83.6
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Education										
Less than high school	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Alternative high school	17	6.1	0	0.0	14	13.1	1	1.8	2	3.0
High school graduate	189	68.0	29	60.4	67	62.6	51	91.1	42	62.7
Some college	35	12.6	9	18.8	15	14.0	2	3.6	9	13.4
4-year degree	23	8.3	5	10.4	6	5.6	1	1.8	11	16.4
Postgraduate	14	5.0	5	10.4	5	4.7	1	1.8	3	4.5
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Marital status										
Never married	117	42.1	18	37.5	43	40.2	24	42.9	32	47.8
Married	148	53.2	25	52.1	60	56.1	29	51.8	34	50.7
Legally separated	1	0.4	1	2.1	0	0.0	0	0.0	0	0.0
Divorced	12	4.3	4	8.3	4	3.7	3	5.4	1	1.5
Widowed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rank/grade										
Cadet/midshipman	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E1-E4	131	47.1	18	37.5	60	56.1	28	50.0	25	37.3
E5-E9	124	44.6	25	52.1	41	38.3	24	42.9	34	50.7
Warrant officer	1	0.4	0	0.0	0	0.0	1	1.8	0	0.0
Commissioned officer	22	7.9	5	10.4	6	5.6	3	5.4	8	11.9
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

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Table 10 (cont). Demographic characteristics, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
DoD occupation group										
Enlisted										
Infantry, gun crews, and seamanship specialists	62	22.3	1	2.1	40	37.4	13	23.2	8	11.9
Electronic equipment repairers	21	7.6	6	12.5	4	3.7	2	3.6	9	13.4
Communications and intelligence specialists	25	9.0	3	6.3	12	11.2	7	12.5	3	4.5
Health care specialists	22	7.9	3	6.3	13	12.1	0	0.0	6	9.0
Other technical and allied specialists	9	3.2	2	4.2	4	3.7	2	3.6	1	1.5
Functional support and administration	34	12.2	7	14.6	8	7.5	9	16.1	10	14.9
Electrical/mechanical equipment repairers	42	15.1	8	16.7	10	9.3	11	19.6	13	19.4
Craftworkers	13	4.7	0	0.0	4	3.7	3	5.4	6	9.0
Service and supply handlers	23	8.3	10	20.8	6	5.6	4	7.1	3	4.5
Non-occupational	3	1.1	2	4.2	0	0.0	1	1.8	0	0.0
Officer										
General officers and executives	1	0.4	0	0.0	0	0.0	0	0.0	1	1.5
Tactical operations officers	6	2.2	2	4.2	1	0.9	0	0.0	3	4.5
Intelligence officers	3	1.1	1	2.1	1	0.9	0	0.0	1	1.5
Engineering and maintenance officers	2	0.7	2	4.2	0	0.0	0	0.0	0	0.0
Scientists and professionals	2	0.7	0	0.0	2	1.9	0	0.0	0	0.0
Health care officers	3	1.1	0	0.0	2	1.9	0	0.0	1	1.5
Administrators	1	0.4	0	0.0	0	0.0	1	1.8	0	0.0
Supply, procurement, and allied officers	2	0.7	0	0.0	0	0.0	2	3.6	0	0.0
Non-occupational	3	1.1	0	0.0	0	0.0	1	1.8	2	3.0
Unknown	1	0.4	1	2.1	0	0.0	0	0.0	0	0.0
Number of deployments										
0	131	47.1	20	41.7	50	46.7	25	44.6	36	53.7
1	83	29.9	20	41.7	34	31.8	16	28.6	13	19.4
2	31	11.2	4	8.3	9	8.4	8	14.3	10	14.9
3 or more	33	11.9	4	8.3	14	13.1	7	12.5	8	11.9
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Table 11. Demographic characteristics, active-component suicide-attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sex										
Male	959	69.7	271	67.2	334	73.4	209	76.8	145	59.2
Female	416	30.3	132	32.8	121	26.6	63	23.2	100	40.8
Age										
17-19	220	16.0	62	15.4	77	16.9	56	20.6	25	10.2
20-24	748	54.4	199	49.4	247	54.3	184	67.6	118	48.2
25-29	220	16.0	77	19.1	67	14.7	18	6.6	58	23.7
30-34	90	6.5	29	7.2	28	6.2	7	2.6	26	10.6
35-39	57	4.1	23	5.7	18	4.0	4	1.5	12	4.9
40-44	26	1.9	10	2.5	10	2.2	2	0.7	4	1.6
45-59	14	1.0	3	0.7	8	1.8	1	0.4	2	0.8
Race										
American Indian/Alaska Native	18	1.3	3	0.7	10	2.2	1	0.4	4	1.6
Asian/Pacific Islander	73	5.3	13	3.2	27	5.9	14	5.1	19	7.8
Black/African American	282	20.5	87	21.6	105	23.1	31	11.4	59	24.1
White/Caucasian	903	65.7	255	63.3	303	66.6	212	77.9	133	54.3
Other/Unknown	99	7.2	45	11.2	10	2.2	14	5.1	30	12.2
Hispanic ethnicity										
Yes	265	19.3	80	19.9	63	13.8	73	26.8	49	20.0
No	1,109	80.7	322	79.9	392	86.2	199	73.2	196	80.0
Unknown	1	0.1	1	0.2	0	0.0	0	0.0	0	0.0
Education										
Less than high school	1	0.1	0	0.0	1	0.2	0	0.0	0	0.0
Alternative high school	65	4.7	0	0.0	43	9.5	9	3.3	13	5.3
High school graduate	1,117	81.2	322	79.9	340	74.7	255	93.8	200	81.6
Some college	104	7.6	50	12.4	38	8.4	3	1.1	13	5.3
4-year degree	60	4.4	18	4.5	23	5.1	3	1.1	16	6.5
Postgraduate	27	2.0	12	3.0	10	2.2	2	0.7	3	1.2
Unknown	1	0.1	1	0.2	0	0.0	0	0.0	0	0.0
Marital status										
Never married	791	57.5	224	55.6	273	60.0	176	64.7	118	48.2
Married	522	38.0	153	38.0	169	37.1	92	33.8	108	44.1
Legally separated	1	0.1	0	0.0	0	0.0	1	0.4	0	0.0
Divorced	59	4.3	25	6.2	13	2.9	2	0.7	19	7.8
Widowed	1	0.1	0	0.0	0	0.0	1	0.4	0	0.0
Other	1	0.1	1	0.2	0	0.0	0	0.0	0	0.0
Component										
Active	1,375	91.9	403	91.6	455	91.0	272	92.2	245	93.9
Reserve	61	4.1	7	1.6	15	3.0	23	7.8	16	6.1
National Guard	60	4.0	30	6.8	30	6.0	0	0.0	0	0.0
Rank/grade										
Cadet/midshipman	2	0.1	2	0.5	0	0.0	0	0.0	0	0.0
E1-E4	1,049	76.3	285	70.7	363	79.8	237	87.1	164	66.9
E5-E9	270	19.6	101	25.1	69	15.2	31	11.4	69	28.2
Warrant officer	3	0.2	0	0.0	3	0.7	0	0.0	0	0.0
Commissioned officer	46	3.3	15	3.7	18	4.0	2	0.7	11	4.5
Unknown	5	0.4	0	0.0	2	0.4	2	0.7	1	0.4

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Table 11 (cont). Demographic characteristics, active-componentsuicide attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
DoD occupation group										
Enlisted										
Infantry, gun crews, and seamanship specialists	198	14.4	7	1.7	102	22.4	69	25.4	20	8.2
Electronic equipment repairers	100	7.3	35	8.7	22	4.8	14	5.1	29	11.8
Communications and intelligence specialists	141	10.3	33	8.2	65	14.3	23	8.5	20	8.2
Health care specialists	129	9.4	41	10.2	52	11.4	0	0.0	36	14.7
Other technical and allied specialists	29	2.1	10	2.5	13	2.9	5	1.8	1	0.4
Functional support and administration	205	14.9	79	19.6	47	10.3	62	22.8	17	6.9
Electrical/mechanical equipment repairers	224	16.3	70	17.4	50	11.0	41	15.1	63	25.7
Craftworkers	46	3.3	17	4.2	14	3.1	8	2.9	7	2.9
Service and supply handlers	184	13.4	68	16.9	67	14.7	25	9.2	24	9.8
Non-occupational	69	5.0	28	6.9	1	0.2	23	8.5	17	6.9
Officer										
General officers and executives	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tactical operations officers	12	0.9	5	1.2	6	1.3	0	0.0	1	0.4
Intelligence officers	3	0.2	0	0.0	1	0.2	1	0.4	1	0.4
Engineering and maintenance officers	3	0.2	1	0.2	1	0.2	0	0.0	1	0.4
Scientists and professionals	1	0.1	0	0.0	1	0.2	0	0.0	0	0.0
Health care officers	12	0.9	7	1.7	3	0.7	0	0.0	2	0.8
Administrators	6	0.4	1	0.2	4	0.9	0	0.0	1	0.4
Supply, procurement, and allied officers	7	0.5	1	0.2	4	0.9	1	0.4	1	0.4
Non-occupational	5	0.4	0	0.0	1	0.2	0	0.0	4	1.6
Unknown	1	0.1	0	0.0	1	0.2	0	0.0	0	0.0
Number of deployments										
0	1,038	75.5	288	71.5	354	77.8	236	86.8	160	65.3
1	215	15.6	65	16.1	69	15.2	19	7.0	62	25.3
2	54	3.9	25	6.2	11	2.4	10	3.7	8	3.3
3 or more	65	4.7	25	6.2	18	4.0	7	2.6	15	6.1
Unknown	3	0.2	0	0.0	3	0.7	0	0.0	0	0.0

Table 12. Event characteristics, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Event location country										
United States	247	88.8	42	87.5	95	88.8	51	91.1	59	88.1
Korea	5	1.8	1	2.1	4	3.7	0	0.0	0	0.0
Japan	5	1.8	1	2.1	0	0.0	1	1.8	3	4.5
Germany	5	1.8	2	4.2	3	2.8	0	0.0	0	0.0
United Kingdom	1	0.4	1	2.1	0	0.0	0	0.0	0	0.0
Other	13	4.7	1	2.1	4	3.7	3	5.4	5	7.5
Unknown	2	0.7	0	0.0	1	0.9	1	1.8	0	0.0
Event setting										
Own residence	123	44.2	27	56.3	41	38.3	19	33.9	36	53.7
Barracks	60	21.6	5	10.4	33	30.8	17	30.4	5	7.5
Residence of friend or family	11	4.0	1	2.1	6	5.6	3	5.4	1	1.5
Work/jobsite	8	2.9	0	0.0	3	2.8	2	3.6	3	4.5
Automobile	28	10.1	5	10.4	9	8.4	6	10.7	8	11.9
Inpatient medical facility	1	0.4	0	0.0	1	0.9	0	0.0	0	0.0
Hotel	13	4.7	3	6.3	2	1.9	3	5.4	5	7.5
Other	34	12.2	7	14.6	12	11.2	6	10.7	9	13.4
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Method of injury										
Drug/alcohol	3	1.1	1	2.1	2	1.9	0	0.0	0	0.0
Hanging/asphyxiation	89	32.0	10	20.8	40	37.4	17	30.4	22	32.8
Poison	3	1.1	1	2.1	1	0.9	1	1.8	0	0.0
Firearm	168	60.4	32	66.7	58	54.2	36	64.3	42	62.7
Military-issued	11	4.0	1	2.1	5	4.7	4	7.1	1	1.5
Personally-owned	155	55.8	31	64.6	51	47.7	32	57.1	41	61.2
Of unknown provenance	2	0.7	0	0.0	2	1.3	0	0.0	0	0.0
Trauma	13	4.7	3	6.3	5	4.7	2	3.6	3	4.5
Other	2	0.7	1	2.1	1	0.9	0	0.0	0	0.0
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Alcohol used during event										
Yes	74	26.6	13	27.1	26	24.3	18	32.1	17	25.4
No	104	37.4	15	31.3	41	38.3	17	30.4	31	46.3
Unknown	100	36.0	20	41.7	40	37.4	21	37.5	19	28.4
Drugs used during event										
Yes ¹	13	4.7	4	8.3	5	4.7	1	1.8	3	4.5
Drugs (illicit/illegal)										
Used, overdose	2	0.7	0	0.0	1	0.9	0	0.0	1	1.5
Used, no overdose	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Prescription medications										
Used, overdose	6	2.2	2	4.2	2	1.9	0	0.0	2	3.0
Used, no overdose	6	2.2	2	4.2	2	1.9	1	1.8	1	1.5
Non-prescription medications										
Used, overdose	2	0.7	0	0.0	1	0.9	0	0.0	1	1.5
Used, no overdose	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
No	148	53.2	23	47.9	57	53.3	26	46.4	42	62.7
Unknown	117	42.1	21	43.8	45	42.1	29	51.8	22	32.8

Continued on next page

Table 12 (cont). Event characteristics, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Communicated intent for self-harm										
Yes ¹	87	31.3	10	20.8	27	25.2	22	39.3	28	41.8
Spouse	30	10.8	5	10.4	9	8.4	7	12.5	9	13.4
Friend	29	10.4	3	6.3	4	3.7	6	10.7	16	23.9
Mental health staff	26	9.4	3	6.3	9	8.4	7	12.5	7	10.4
No	191	68.7	38	64.4	80	62.0	34	44.7	39	39.4
No known history	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Is there evidence the event involved death-risk gambling?										
Yes	9	3.2	2	4.2	2	1.9	1	1.8	4	6.0
No	236	84.9	37	77.1	93	86.9	45	80.4	61	91.0
Unknown	33	11.9	9	18.8	12	11.2	10	17.9	2	3.0
Is there evidence the event was planned and/or premeditated?										
Yes	110	39.6	21	43.8	46	43.0	13	23.2	30	44.8
No	107	38.5	12	25.0	36	33.6	29	51.8	30	44.8
Unknown	61	21.9	15	31.3	25	23.4	14	25.0	7	10.4
Event observable										
Yes	57	20.5	7	14.6	28	26.2	10	17.9	12	17.9
No	215	77.3	41	85.4	75	70.1	45	80.4	54	80.6
Unknown	6	2.2	0	0.0	4	3.7	1	1.8	1	1.5
Left a suicide note										
Yes	75	27.0	20	41.7	25	23.4	13	23.2	17	25.4
No	164	59.0	22	45.8	64	59.8	30	53.6	48	71.6
Unknown	39	14.0	6	12.5	18	16.8	13	23.2	2	3.0
Residence at time of event										
Barracks	77	27.7	6	12.5	47	43.9	19	33.9	5	7.5
BEQ/BOQ	14	5.0	0	0.0	0	0.0	9	16.1	5	7.5
On-base family housing	36	12.9	8	16.7	20	18.7	3	5.4	5	7.5
Off-base	139	50.0	32	66.7	38	35.5	25	44.6	44	65.7
Ship	2	0.7	0	0.0	0	0.0	0	0.0	2	3.0
Other	8	2.9	2	4.2	0	0.0	0	0.0	6	9.0
Unknown	2	0.7	0	0.0	2	1.9	0	0.0	0	0.0
Resided alone at time of event										
Yes	101	36.3	23	47.9	33	30.8	24	42.9	21	31.3
No	156	56.1	23	47.9	60	56.1	30	53.6	43	64.2
Unknown	21	7.6	2	4.2	14	13.1	2	3.6	3	4.5
Children resided with service member										
Yes	49	17.6	8	16.7	19	17.8	8	14.3	14	20.9
No	45	16.2	8	16.7	20	18.7	7	12.5	10	14.9
NA	182	65.5	32	66.7	66	61.7	41	73.2	43	64.2
Unknown	2	0.7	0	0.0	2	1.9	0	0.0	0	0.0
Gun in home/immediate environment										
Yes	158	56.8	27	56.3	56	52.3	34	60.7	41	61.2
No	96	34.5	17	35.4	35	32.7	20	35.7	24	35.8
Unknown	24	8.6	4	8.3	16	15.0	2	3.6	2	3.0

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Table 12 (cont). Event characteristics, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Duty environment ¹										
Permanent command/garrison	272	67.0	53	77.9	122	65.6	53	71.6	44	56.4
Leave	27	6.7	2	2.9	10	5.4	7	9.5	8	10.3
Temporary duty assignment	13	3.2	1	1.5	3	1.6	2	2.7	7	9.0
Deployed	9	2.2	1	1.5	5	2.7	0	0.0	3	3.8
Training	16	3.9	0	0.0	5	2.7	6	8.1	5	6.4
Not in a duty status	97	23.9	16	23.5	58	31.2	15	20.3	8	10.3
Other	93	22.9	13	19.1	41	22.0	15	20.3	24	30.8

¹Subcategories are not mutually exclusive.

Table 13. Event characteristics, active-component suicide-attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Event location country										
United States	1,151	83.7	306	75.9	394	86.6	237	87.1	214	87.3
Korea	29	2.1	10	2.5	18	4.0	1	0.4	0	0.0
Japan	66	4.8	27	6.7	7	1.5	25	9.2	7	2.9
Germany	30	2.2	23	5.7	7	1.5	0	0.0	0	0.0
United Kingdom	13	0.9	12	3.0	0	0.0	0	0.0	1	0.4
Other	34	2.5	23	5.7	3	0.7	2	0.7	6	2.4
Unknown	52	3.8	2	0.5	26	5.7	7	2.6	17	6.9
Event setting										
Own residence	527	38.3	190	47.1	144	31.6	75	27.6	118	48.2
Barracks	581	42.3	136	33.7	232	51.0	153	56.3	60	24.5
Residence of friend or family	51	3.7	14	3.5	12	2.6	11	4.0	14	5.7
Work/jobsite	37	2.7	8	2.0	8	1.8	5	1.8	16	6.5
Automobile	79	5.7	27	6.7	33	7.3	12	4.4	7	2.9
Inpatient medical facility	5	0.4	2	0.5	0	0.0	2	0.7	1	0.4
Hotel	25	1.8	12	3.0	4	0.9	3	1.1	6	2.4
Other	68	4.9	14	3.5	20	4.4	11	4.0	23	9.4
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
Method of injury										
Drug/alcohol	821	59.7	249	61.8	261	57.4	160	58.8	151	61.6
Hanging/asphyxiation	181	13.2	40	9.9	74	16.3	38	14.0	29	11.8
Poison	47	3.4	14	3.5	19	4.2	11	4.0	3	1.2
Firearm	58	4.2	19	4.7	16	3.5	8	2.9	15	6.1
Military-issued	8	0.6	3	0.7	1	0.2	1	0.4	3	1.2
Personally-owned	50	3.6	16	4.0	15	3.3	7	2.6	12	4.9
Of unknown provenance	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Trauma	230	16.7	69	17.1	70	15.4	51	18.8	40	16.3
Other	31	2.3	12	3.0	9	2.0	3	1.1	7	2.9
Unknown	7	0.5	0	0.0	6	1.3	1	0.4	0	0.0
Alcohol used during event										
Yes	449	32.7	151	37.5	138	30.3	66	24.3	94	38.4
No	900	65.5	244	60.5	309	67.9	202	74.3	145	59.2
Unknown	26	1.9	8	2.0	8	1.8	4	1.5	6	2.4
Drugs used during event										
Yes ¹	746	54.3	217	53.8	242	53.2	145	53.3	142	58.0
Drugs (illicit/illegal)										
Used, overdose	58	4.2	12	3.0	24	5.3	14	5.1	8	3.3
Used, no overdose	33	2.4	9	2.2	13	2.9	4	1.5	7	2.9
Prescription medications										
Used, overdose	362	26.3	98	24.3	122	26.8	77	28.3	65	26.5
Used, no overdose	99	7.2	41	10.2	33	7.3	8	2.9	17	6.9
Non-prescription medications										
Used, overdose	294	21.4	82	20.3	85	18.7	76	27.9	51	20.8
Used, no overdose	64	4.7	15	3.7	20	4.4	7	2.6	22	9.0
No	612	44.5	183	45.4	205	45.1	123	45.2	101	41.2
Unknown	17	1.2	3	0.7	8	1.8	4	1.5	2	0.8

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Table 13 (cont). Event characteristics, active-component suicide attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Communicated intent for self-harm										
Yes ¹	275	20.0	89	22.1	93	20.4	28	10.3	65	26.5
Spouse	75	5.5	29	7.2	24	5.3	7	2.6	15	6.1
Friend	98	7.1	30	7.4	41	9.0	6	2.2	21	8.6
Mental health staff	54	3.9	17	4.2	16	3.5	2	0.7	19	7.8
No	1,096	79.7	314	65.6	360	67.2	242	84.3	180	60.0
No known history	4	0.3	0	0.0	2	0.4	2	0.7	0	0.0
Is there evidence the event involved death-risk gambling?										
Yes	100	7.3	34	8.4	40	8.8	12	4.4	14	5.7
No	1,242	90.3	360	89.3	400	87.9	257	94.5	225	91.8
Unknown	33	2.4	9	2.2	15	3.3	3	1.1	6	2.4
Is there evidence the event was planned and/or premeditated?										
Yes	388	28.2	119	29.5	102	22.4	103	37.9	64	26.1
No	943	68.6	270	67.0	338	74.3	166	61.0	169	69.0
Unknown	44	3.2	14	3.5	15	3.3	3	1.1	12	4.9
Event observable										
Yes	502	36.5	124	30.8	161	35.4	112	41.2	105	42.9
No	847	61.6	274	68.0	286	62.9	157	57.7	130	53.1
Unknown	26	1.9	5	1.2	8	1.8	3	1.1	10	4.1
Left a suicide note										
Yes	172	12.5	67	16.6	62	13.6	18	6.6	25	10.2
No	1,173	85.3	325	80.6	383	84.2	252	92.6	213	86.9
Unknown	30	2.2	11	2.7	10	2.2	2	0.7	7	2.9
Residence at time of event										
Barracks	642	46.7	141	35.0	260	57.1	168	61.8	73	29.8
BEQ/BOQ	34	2.5	19	4.7	4	0.9	8	2.9	3	1.2
On-base family housing	117	8.5	49	12.2	40	8.8	16	5.9	12	4.9
Off-base	501	36.4	174	43.2	131	28.8	71	26.1	125	51.0
Ship	17	1.2	0	0.0	0	0.0	0	0.0	17	6.9
Other	56	4.1	17	4.2	18	4.0	9	3.3	12	4.9
Unknown	8	0.6	3	0.7	2	0.4	0	0.0	3	1.2
Resided alone at time of event										
Yes	504	36.7	201	49.9	154	33.8	55	20.2	94	38.4
No	832	60.5	195	48.4	290	63.7	208	76.5	139	56.7
Unknown	39	2.8	7	1.7	11	2.4	9	3.3	12	4.9
Children resided with service member										
Yes	137	10.0	43	10.7	49	10.8	17	6.3	28	11.4
No	139	10.1	41	10.2	52	11.4	15	5.5	31	12.7
NA	1,097	79.8	318	78.9	354	77.8	239	87.9	186	75.9
Unknown	2	0.1	1	0.2	0	0.0	1	0.4	0	0.0
Gun in home/immediate environment										
Yes	124	9.0	45	11.2	33	7.3	22	8.1	24	9.8
No	1,214	88.3	351	87.1	410	90.1	241	88.6	212	86.5
Unknown	37	2.7	7	1.7	12	2.6	9	3.3	9	3.7

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Table 13 (cont). Event characteristics, active-component suicide attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Duty environment ¹										
Permanent command/garrison	1,058	76.9	333	82.6	349	76.7	212	77.9	164	66.9
Leave	35	2.5	17	4.2	8	1.8	5	1.8	5	2.0
Temporary duty assignment	21	1.5	5	1.2	2	0.4	2	0.7	12	4.9
Deployed	13	0.9	3	0.7	3	0.7	2	0.7	5	2.0
Training	93	6.8	12	3.0	56	12.3	15	5.5	10	4.1
Not in a duty status	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other	122	8.9	41	10.2	27	5.9	26	9.6	28	11.4

¹Subcategories are not mutually exclusive.

Table 14. Physical and mental health characteristics, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Any mental health diagnosis										
Yes ¹	126	45.3	18	37.5	58	54.2	23	41.1	27	40.3
Mood	53	19.1	8	16.7	19	17.8	14	25.0	12	17.9
Anxiety	40	14.4	6	12.5	18	16.8	9	16.1	7	10.4
Adjustment	61	21.9	10	20.8	32	29.9	7	12.5	12	17.9
Substance use	60	21.6	4	8.3	26	24.3	14	25.0	16	23.9
No/no known history	152	54.7	30	62.5	49	45.8	33	58.9	40	59.7
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
History of sleep disorder										
Yes	37	13.3	4	8.3	25	23.4	4	7.1	4	6.0
No/no known history	241	86.7	44	91.7	82	76.6	52	92.9	63	94.0
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
History of traumatic brain injury										
Yes	16	5.8	2	4.2	9	8.4	2	3.6	3	4.5
No/no known history	262	94.2	46	95.8	98	91.6	54	96.4	64	95.5
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Family history of mental illness										
Yes	37	13.3	8	16.7	17	15.9	5	8.9	7	10.4
No/no known history	241	86.7	40	83.3	90	84.1	51	91.1	60	89.6
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Prior self-injury										
Yes	39	14.0	5	10.4	19	17.8	7	12.5	8	11.9
One prior event	22	7.9	4	8.3	8	7.5	5	8.9	5	7.5
More than one prior event	16	5.8	1	2.1	10	9.3	2	3.6	3	4.5
Most recent event similar to current event	9	3.2	3	6.3	3	2.8	1	1.8	2	3.0
No/no known history	239	86.0	43	89.6	88	82.2	49	87.5	59	88.1
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Taken psychotropic medications										
Yes	66	23.7	10	20.8	35	32.7	13	23.2	8	11.9
No/no known history	212	76.3	38	79.2	72	67.3	43	76.8	59	88.1
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Use of psychotropic medications, last 90 days										
Yes ¹	42	15.1	5	10.4	22	20.6	10	17.9	5	7.5
Antidepressants	39	14.0	5	10.4	19	17.8	10	17.9	5	7.5
Anxiolytics	16	5.8	1	2.1	10	9.3	3	5.4	2	3.0
Antimanic	1	0.4	0	0.0	0	0.0	0	0.0	1	1.5
Anticonvulsant	1	0.4	0	0.0	0	0.0	1	1.8	0	0.0
Antipsychotic	2	0.7	0	0.0	2	1.9	0	0.0	0	0.0
Sleep medication	22	7.9	3	6.3	10	9.3	6	10.7	3	4.5
No/no known history	236	84.9	43	89.6	85	79.4	46	82.1	62	92.5
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

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Table 14 (cont). Physical and mental health characteristics, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pain medication use										
Yes	33	11.9	3	6.3	17	15.9	8	14.3	5	7.5
History of opioid use	6	2.2	2	4.2	3	2.8	1	1.8	0	0.0
No/no known history	245	88.1	45	93.8	90	84.1	48	85.7	62	92.5
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Health/social services, last 90 days										
Yes ¹	147	52.9	24	50.0	63	58.9	29	51.8	31	46.3
Medical treatment facility	134	48.2	21	43.8	57	53.3	26	46.4	30	44.8
Substance abuse services	26	9.4	2	4.2	11	10.3	7	12.5	6	9.0
Family assistance program	16	5.8	2	4.2	7	6.5	6	10.7	1	1.5
Mental health ¹	84	30.2	10	20.8	41	38.3	18	32.1	15	22.4
Outpatient	82	29.5	9	18.8	40	37.4	18	32.1	15	22.4
Inpatient	25	9.0	4	8.3	12	11.2	4	7.1	5	7.5
No/no known history	131	47.1	24	50.0	44	41.1	27	48.2	36	53.7
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

¹Subcategories are not mutually exclusive.

Table 15. Physical and mental health characteristics, active-component suicide-attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Any mental health diagnosis										
Yes ¹	848	61.7	267	66.3	274	60.2	154	56.6	153	62.4
Mood	443	32.2	158	39.2	133	29.2	73	26.8	79	32.2
Anxiety	301	21.9	94	23.3	96	21.1	52	19.1	59	24.1
Adjustment	331	24.1	113	28.0	115	25.3	50	18.4	53	21.6
Substance use	322	23.4	86	21.3	108	23.7	72	26.5	56	22.9
No/no known history	525	38.2	136	33.7	179	39.3	118	43.4	92	37.6
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
History of sleep disorder										
Yes	127	9.2	40	9.9	52	11.4	17	6.3	18	7.3
No/no known history	1,246	90.6	363	90.1	401	88.1	255	93.8	227	92.7
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
History of traumatic brain injury										
Yes	47	3.4	12	3.0	23	5.1	6	2.2	6	2.4
No/no known history	1,324	96.3	390	96.8	430	94.5	265	97.4	239	97.6
Unknown	4	0.3	1	0.2	2	0.4	1	0.4	0	0.0
Family history of mental illness										
Yes	442	32.1	157	39.0	132	29.0	73	26.8	80	32.7
No/no known history	930	67.6	246	61.0	320	70.3	199	73.2	165	67.3
Unknown	3	0.2	0	0.0	3	0.7	0	0.0	0	0.0
Prior self-injury										
Yes	431	31.3	129	32.0	142	31.2	74	27.2	86	35.1
One prior event	202	14.7	56	13.9	67	14.7	39	14.3	40	16.3
More than one prior event	226	16.4	72	17.9	73	16.0	35	12.9	46	18.8
Most recent event similar to current event	227	16.5	66	16.4	75	16.5	46	16.9	40	16.3
No/no known history	942	68.5	274	68.0	311	68.4	198	72.8	159	64.9
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
Taken psychotropic medications										
Yes	524	38.1	192	47.6	143	31.4	94	34.6	95	38.8
No/no known history	847	61.6	211	52.4	309	67.9	178	65.4	149	60.8
Unknown	4	0.3	0	0.0	3	0.7	0	0.0	1	0.4
Use of psychotropic medications, last 90 days										
Yes ¹	447	32.5	164	40.7	121	26.6	83	30.5	79	32.2
Antidepressants	400	29.1	145	36.0	108	23.7	75	27.6	72	29.4
Anxiolytics	173	12.6	56	13.9	48	10.5	35	12.9	34	13.9
Antimanic	9	0.7	5	1.2	2	0.4	0	0.0	2	0.8
Anticonvulsant	9	0.7	6	1.5	2	0.4	0	0.0	1	0.4
Antipsychotic	36	2.6	12	3.0	13	2.9	8	2.9	3	1.2
Sleep medication	183	13.3	70	17.4	52	11.4	36	13.2	25	10.2
No/no known history	924	67.2	239	59.3	331	72.7	189	69.5	165	67.3
Unknown	4	0.3	0	0.0	3	0.7	0	0.0	1	0.4

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Table 15 (cont). Physical and mental health characteristics, active-component suicide attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pain medication use										
Yes	196	14.3	62	15.4	70	15.4	29	10.7	35	14.3
History of opioid use	32	2.3	16	4.0	12	2.6	1	0.4	3	1.2
No/no known history	1,174	85.4	340	84.4	383	84.2	241	88.6	210	85.7
Unknown	5	0.4	1	0.2	2	0.4	2	0.7	0	0.0
Health/social services, last 90 days										
Yes ¹	858	62.4	273	67.7	280	61.5	160	58.8	145	59.2
Medical treatment facility	692	50.3	230	57.1	213	46.8	138	50.7	111	45.3
Substance abuse services	149	10.8	55	13.6	48	10.5	24	8.8	22	9.0
Family assistance program	54	3.9	16	4.0	20	4.4	11	4.0	7	2.9
Mental health ¹	680	49.5	206	51.1	234	51.4	120	44.1	120	49.0
Outpatient	659	47.9	201	49.9	225	49.5	120	44.1	113	46.1
Inpatient	207	15.1	62	15.4	72	15.8	36	13.2	37	15.1
No/no known history	515	37.5	130	32.3	173	38.0	112	41.2	100	40.8
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0

¹Subcategories are not mutually exclusive.

Table 16. Contextual factors, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Failed or failing relationship, last 90 days										
Yes ¹	109	39.2	20	41.7	45	42.1	20	35.7	24	35.8
Intimate relationship	100	36.0	18	37.5	42	39.3	17	30.4	23	34.3
Other relationship	27	9.7	4	8.3	10	9.3	6	10.7	7	10.4
No/no known history	169	60.8	28	58.3	62	57.9	36	64.3	43	64.2
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Friend and family stressors, last 90 days										
Yes ¹	14	5.0	1	2.1	6	5.6	2	3.6	5	7.5
Death of spouse or other family member (manner other than suicide)	9	3.2	1	2.1	5	4.7	0	0.0	3	4.5
Death of friend (manner other than suicide)	1	0.4	0	0.0	0	0.0	1	1.8	0	0.0
Serious illness of friend or family member	5	1.8	0	0.0	2	1.9	1	1.8	2	3.0
No/no known history	264	95.0	47	97.9	101	94.4	54	96.4	62	92.5
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
History of friend or family death by suicide										
Yes ¹	25	9.0	3	6.3	6	5.6	9	16.1	7	10.4
Spouse	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Family other than spouse	6	2.2	2	4.2	1	0.9	3	5.4	0	0.0
Friend	19	6.8	1	2.1	5	4.7	6	10.7	7	10.4
No/no known history	253	91.0	45	93.8	101	94.4	47	83.9	60	89.6
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Administrative/legal problems, last 90 days										
Yes ¹	90	32.4	15	31.3	34	31.8	17	30.4	24	35.8
Courts martial proceedings	7	2.5	1	2.1	4	3.7	0	0.0	2	3.0
Article 15/Non-judicial punishment	19	6.8	0	0.0	10	9.3	3	5.4	6	9.0
Administrative separation proceedings	17	6.1	1	2.1	13	12.1	3	5.4	0	0.0
Away without leave/deserter status	9	3.2	2	4.2	2	1.9	1	1.8	4	6.0
Medical evaluation board proceedings	12	4.3	0	0.0	6	5.6	3	5.4	3	4.5
Civil legal proceedings	25	9.0	6	12.5	9	8.4	3	5.4	7	10.4
Non-selection for promotion	8	2.9	0	0.0	5	4.7	2	3.6	1	1.5
Under investigation	49	17.6	9	18.8	16	15.0	8	14.3	16	23.9
No/no known history	188	67.6	33	68.8	73	68.2	39	69.6	43	64.2
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Excessive debt/bankruptcy, last 90 days										
Yes	13	4.7	0	0.0	6	5.6	5	8.9	2	3.0
No/no known history	265	95.3	48	100.0	101	94.4	51	91.1	65	97.0
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Workplace difficulties, last 90 days										
Yes ¹	52	18.7	10	20.8	19	17.8	12	21.4	11	16.4
Job problems	45	16.2	8	16.7	17	15.9	10	17.9	10	14.9
Supervisor/coworker issues	16	5.8	4	8.3	5	4.7	3	5.4	4	6.0
Poor performance review	16	5.8	1	2.1	10	9.3	3	5.4	2	3.0
Unit/workplace hazing	1	0.4	0	0.0	1	0.9	0	0.0	0	0.0
No/no known history	226	81.3	38	79.2	88	82.2	44	78.6	56	83.6
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

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Table 16 (cont). Contextual factors, active-component suicide DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Abuse, assault, or harassment victimization, last year										
Yes ¹	12	4.3	2	4.2	7	6.5	2	3.6	1	1.5
Physical abuse or assault	9	3.2	0	0.0	7	6.5	2	3.6	0	0.0
Sexual abuse or assault	1	0.4	0	0.0	1	0.9	0	0.0	0	0.0
Emotional abuse	9	3.2	1	2.1	5	4.7	2	3.6	1	1.5
Sexual harassment	2	0.7	1	2.1	1	0.9	0	0.0	0	0.0
No/no known history	266	95.7	46	95.8	100	93.5	54	96.4	66	98.5
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Abuse, assault, or harassment perpetration, last year										
Yes ¹	37	13.3	8	16.7	14	13.1	7	12.5	8	11.9
Physical abuse or assault	18	6.5	2	4.2	9	8.4	4	7.1	3	4.5
Sexual abuse or assault	17	6.1	5	10.4	5	4.7	3	5.4	4	6.0
Emotional abuse	12	4.3	2	4.2	6	5.6	1	1.8	3	4.5
Sexual harassment	9	3.2	4	8.3	1	0.9	1	1.8	3	4.5
No/no known history	241	86.7	40	83.3	93	86.9	49	87.5	59	88.1
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

¹Subcategories are not mutually exclusive.

Table 17. Contextual factors, active-component suicide-attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Failed or failing relationship, last 90 days										
Yes ¹	529	38.5	167	41.4	157	34.5	100	36.8	105	42.9
Intimate relationship	468	34.0	150	37.2	140	30.8	93	34.2	85	34.7
Other relationship	125	9.1	38	9.4	36	7.9	16	5.9	35	14.3
No/no known history	844	61.4	236	58.6	296	65.1	172	63.2	140	57.1
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
Friend and family stressors, last 90 days										
Yes ¹	139	10.1	34	8.4	47	10.3	29	10.7	29	11.8
Death of spouse or other family member (manner other than suicide)	47	3.4	12	3.0	16	3.5	8	2.9	11	4.5
Death of friend (manner other than suicide)	40	2.9	5	1.2	21	4.6	8	2.9	6	2.4
Serious illness of friend or family member	66	4.8	19	4.7	18	4.0	15	5.5	14	5.7
No/no known history	1,234	89.7	369	91.6	406	89.2	243	89.3	216	88.2
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
History of friend or family death by suicide										
Yes ¹	229	16.7	67	16.6	89	19.6	24	8.8	49	20.0
Spouse	5	0.4	0	0.0	5	1.1	0	0.0	0	0.0
Family other than spouse	104	7.6	32	7.9	43	9.5	10	3.7	19	7.8
Friend	149	10.8	40	9.9	58	12.7	16	5.9	35	14.3
No/no known history	1,144	83.2	336	83.4	364	80.0	248	91.2	196	80.0
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
Administrative/legal problems, last 90 days										
Yes ¹	406	29.5	119	29.5	149	32.7	66	24.3	72	29.4
Courts martial proceedings	20	1.5	6	1.5	6	1.3	5	1.8	3	1.2
Article 15/Non-judicial punishment	113	8.2	33	8.2	49	10.8	18	6.6	13	5.3
Administrative separation proceedings	124	9.0	35	8.7	48	10.5	22	8.1	19	7.8
Away without leave/deserter status	33	2.4	8	2.0	8	1.8	9	3.3	8	3.3
Medical evaluation board proceedings	96	7.0	34	8.4	33	7.3	15	5.5	14	5.7
Civil legal proceedings	75	5.5	25	6.2	24	5.3	8	2.9	18	7.3
Non-selection for promotion	31	2.3	11	2.7	10	2.2	3	1.1	7	2.9
Under investigation	113	8.2	42	10.4	39	8.6	17	6.3	15	6.1
No/no known history	967	70.3	284	70.5	304	66.8	206	75.7	173	70.6
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
Excessive debt/bankruptcy, last 90 days										
Yes	66	4.8	22	5.5	24	5.3	7	2.6	13	5.3
No/no known history	1,306	95.0	381	94.5	428	94.1	265	97.4	232	94.7
Unknown	3	0.2	0	0.0	3	0.7	0	0.0	0	0.0
Workplace difficulties, last 90 days										
Yes ¹	433	31.5	146	36.2	135	29.7	65	23.9	87	35.5
Job problems	334	24.3	117	29.0	102	22.4	48	17.6	67	27.3
Supervisor/coworker issues	218	15.9	68	16.9	65	14.3	31	11.4	54	22.0
Poor performance review	95	6.9	32	7.9	31	6.8	12	4.4	20	8.2
Unit/workplace hazing	40	2.9	7	1.7	17	3.7	6	2.2	10	4.1
No/no known history	940	68.4	257	63.8	318	69.9	207	76.1	158	64.5
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0

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Table 17 (cont). Contextual factors, active-component suicide attempt DoDSER forms, CY18

	Total		Air Force		Army		Marine Corps		Navy	
	No.	%	No.	%	No.	%	No.	%	No.	%
Abuse, assault, or harassment victimization, last year										
Yes ¹	176	12.8	56	13.9	56	12.3	30	11.0	34	13.9
Physical abuse or assault	53	3.9	17	4.2	17	3.7	12	4.4	7	2.9
Sexual abuse or assault	74	5.4	27	6.7	18	4.0	16	5.9	13	5.3
Emotional abuse	96	7.0	28	6.9	33	7.3	10	3.7	25	10.2
Sexual harassment	38	2.8	5	1.2	15	3.3	7	2.6	11	4.5
No/no known history	1,197	87.1	347	86.1	397	87.3	242	89.0	211	86.1
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0
Abuse, assault, or harassment perpetration, last year										
Yes ¹	65	4.7	17	4.2	25	5.5	17	6.3	6	2.4
Physical abuse or assault	30	2.2	13	3.2	9	2.0	5	1.8	3	1.2
Sexual abuse or assault	25	1.8	5	1.2	11	2.4	8	2.9	1	0.4
Emotional abuse	22	1.6	7	1.7	7	1.5	4	1.5	4	1.6
Sexual harassment	6	0.4	1	0.2	5	1.1	0	0.0	0	0.0
No/no known history	1,308	95.1	386	95.8	428	94.1	255	93.8	239	97.6
Unknown	2	0.1	0	0.0	2	0.4	0	0.0	0	0.0

¹Subcategories are not mutually exclusive.

Chapter 4: DoDSER Summary - Active-Component U.S. Air Force

Introduction

This chapter presents an overview of the active-component U.S. Air Force suicide and suicide attempt data. Data for all active-component events with a submitted DoDSER form are included in the descriptive summary and the data tables (Tables 10-17). Variables of particular interest are presented in the following text; however, the reader is encouraged to review the DoDSER data tables in Chapter 3 for additional information. This chapter presents case counts and proportions of the total number of cases observed; it does not present suicide rates, which are covered in Chapter 2.

Suicide Mortality

There were 40 active-component suicide deaths confirmed by the AFMES for CY18 as of January 31, 2019. For inclusion in this report, a DoDSER form was required for submission for these events by March 31, 2019. A total 35 of these forms were submitted. An additional 13 events that were either confirmed by AFMES after January 31 or were still pending a final determination as of January 31 had DoDSER forms submitted in time for inclusion in this report. Hence, the total number of deaths described in the corresponding tables and analyses equals 48.

Suicide Attempts

Over the course of CY18, DoDSER forms were submitted for 377 suicide attempts in 352 unique individuals.

Occurrence of Multiple Instances of Suicidal Behavior

No suicide DoDSER form was associated with one or more previously reported suicide attempt(s) that occurred between CY10 and CY18.

A total of 37 CY18 suicide-attempt DoDSER forms had one or more previous suicide attempt(s) recorded in the DoDSER system since CY10. The median number of days between the most recently reported suicide attempt and the penultimate attempt reported was 91 days.

Demographic Characteristics

The most common demographic profile among suicide DoDSER forms corresponded to a non-Hispanic, white male, aged 17-29 (39.6 percent). There was a pronounced difference in the proportion of males and females associated with each event type. Females accounted for 10.3 percent of suicide DoDSER forms and 34.3 percent of suicide-attempt DoDSER forms.

Method of Injury

Firearm use was the most common (66.7 percent) method of injury identified in suicide DoDSER forms. The majority (96.9 percent) of the firearms used were personal possessions. Relatively few firearm deaths (3.1 percent) resulted from the self-directed use of a military-issued firearm. There was no statistically significant difference in the proportion of firearm use as the method of injury among active-component suicide DoDSER forms between CY18 and the CY15-CY17 average.

For suicide-attempt DoDSER forms, drug and/or alcohol overdose was the most frequently reported method of injury (61.8 percent). There was a statistically significant increase (from 54.8 percent to 61.8 percent) in the proportion of active-component suicide-attempt forms that indicated a drug and/or alcohol overdose between CY18 and the three year average for CY15-CY17.

Behavioral Health History

Among suicide DoDSER forms, 37.5 percent had at least one current or past behavioral health diagnosis in their medical record. Adjustment disorders (20.8 percent) and mood disorders (16.7 percent) were the most common diagnostic categories. Among Air Force suicide-attempt forms, 66.3 percent identified at least one current or past behavioral health diagnosis in their medical record. Mood disorders (39.2 percent) and adjustment disorders (28.0 percent) were the most common diagnostic categories.

Figure 7 displays the prevalence of mood, adjustment, and substance use disorders among active-component suicide and suicide-attempt DoDSER forms. There were no statistically significant differences between CY18 and the three year average for CY15-CY17 for either suicide or suicide-attempt DoDSER forms.

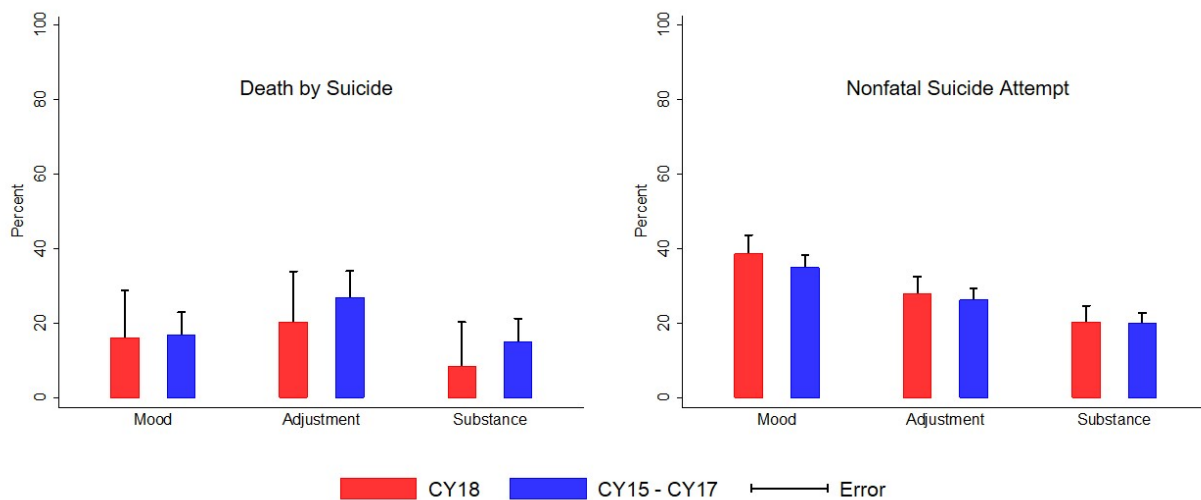


Figure 7. Percent of active-component DoDSER forms that indicated a history of mood, adjustment, or substance use disorders, by event type, CY15-CY18, U.S. Air Force.

Health Care Utilization

Regardless of whether or not an individual voluntarily disclosed – or was assessed for – suicidal thoughts, feelings, or behaviors, 50.0 percent of the airmen who died by suicide in CY18 had been in contact with the MHS in the 90 days prior to death. The most common type of appointment was a general visit to a medical treatment facility (43.8 percent) and the second most common type was a mental health visit (20.8 percent). Outpatient mental health services were utilized in 18.8 percent of cases while inpatient mental health services were utilized in 8.3 percent of cases.

In total, 67.7 percent of the Air Force suicide-attempt DoDSER forms indicated contact with the MHS in the 90 days prior to the behavior. The most common type of appointment was a general visit to a medical treatment facility (57.1 percent) while the second most common type was a mental health visit (51.1 percent). Outpatient mental health services were utilized by 49.9 percent of cases while inpatient mental health services were utilized by 15.4 percent.

Stressors

Among suicide DoDSER forms, relationship (41.7 percent), legal/administrative (31.3 percent), and work (20.8 percent) stressors within 90 days of the event were the most common stressors identified in CY18 (Figure 8). Similarly, among suicide-attempt DoDSER forms, relationship (41.4 percent), legal/administrative (29.5 percent), and work (36.2 percent) stressors were the most common stressors identified in CY18 (Figure 8). There were no statistically significant differences in the prevalence of these risk factors for either suicide or suicide-attempt DoDSER forms between CY18 and the three-year averages for CY15-CY17.

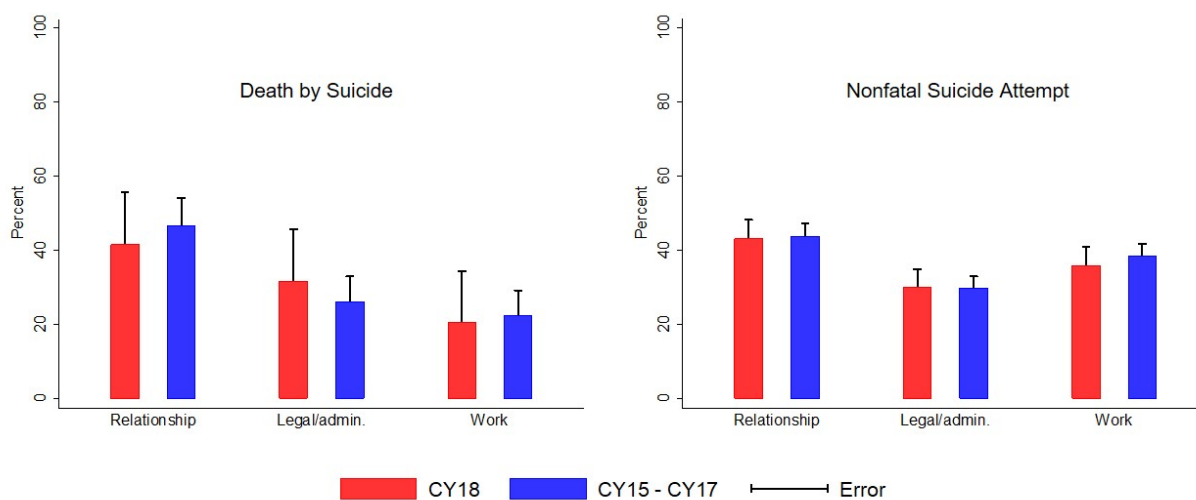


Figure 8. Percent of active-component DoDSER forms that indicated selected stressors within 90 days of the event, by event type, CY15-CY18, U.S. Air Force.

Chapter 5: DoDSER Summary - Active-Component U.S. Army

Introduction

This chapter presents an overview of the active-component U.S. Army suicide and suicide attempt data. Data for all events with a submitted DoDSER form are included in the descriptive summary and the data tables (Tables 10-17). Variables of particular interest are presented in the following text; however, the reader is encouraged to review the DoDSER data tables in Chapter 3 for additional information. This chapter presents case counts and proportions of the total number of cases observed; it does not present suicide rates, which are covered in Chapter 2.

Suicide Mortality

There were 100 active-component suicide deaths confirmed by the AFMES for CY18 as of January 31, 2019. For inclusion in this report, a DoDSER form was required for submission for these events by March 31, 2019. All 100 of these forms were submitted. An additional seven events that were either confirmed by AFMES after January 31 or were still pending a final determination as of January 31 had DoDSER forms submitted in time for inclusion in this report. Hence, the total number of deaths described in the corresponding tables and analyses equals 107.

Suicide Attempts

Over the course of CY18, DoDSER forms were submitted for 480 suicide attempts in 462 unique individuals.

Occurrence of Multiple Instances of Suicidal Behavior

Three suicide DoDSER forms were associated with one or more previously reported suicide attempt(s) that occurred between CY08 and CY18.

A total of 23 CY18 suicide-attempt DoDSER forms had one or more previous suicide attempt(s) recorded in the DoDSER system since CY08. The median number of days between the most recently reported suicide attempt and the penultimate attempt reported was 33 days.

Demographic Characteristics

The most common demographic profile among suicide DoDSER forms corresponded to a non-Hispanic, white male, aged 17-29 (45.8 percent). There was a pronounced difference in the proportion of males and females associated with each event type. Females accounted for 5.9 percent of suicide DoDSER forms and 28.4 percent of suicide-attempt DoDSER forms.

Method of Injury

Firearm use was the most common (54.2 percent) method of injury identified in suicide DoDSER forms. The majority (87.9 percent) of the firearms used were personal possessions. Relatively few firearm deaths (8.6 percent) resulted from the self-directed use of a military-issued firearm. There was no statistically significant difference in the proportion of firearm use as the method of injury among active-component DoDSER forms between CY18 and the CY15-CY17 average.

For suicide-attempt DoDSER forms, drug and/or alcohol overdose was the most frequently reported method of injury (57.4 percent). There was no statistically significant difference between the proportion of active-component suicide-attempt DoDSER forms in CY18 for which drug and/or alcohol overdose was the method of injury and the CY15-CY17 average.

Behavioral Health History

Among suicide DoDSER forms, 54.2 percent had at least one current or past behavioral health diagnosis in their medical record. Adjustment disorders (29.9 percent) and substance use disorders (24.3 percent) were the most common diagnostic categories. Among Army suicide-attempt DoDSER forms, 60.2 percent had at least one current or past behavioral health diagnosis present in their medical record. Mood disorders (29.2 percent) and adjustment disorders (25.3 percent) were the most common diagnostic categories.

Figure 9 displays the prevalence of mood, adjustment, and substance use disorders among active-component suicide and suicide-attempt DoDSER forms. There were no statistically significant differences between CY18 and the CY15-CY17 average for either suicide or suicide-attempt DoDSER forms.

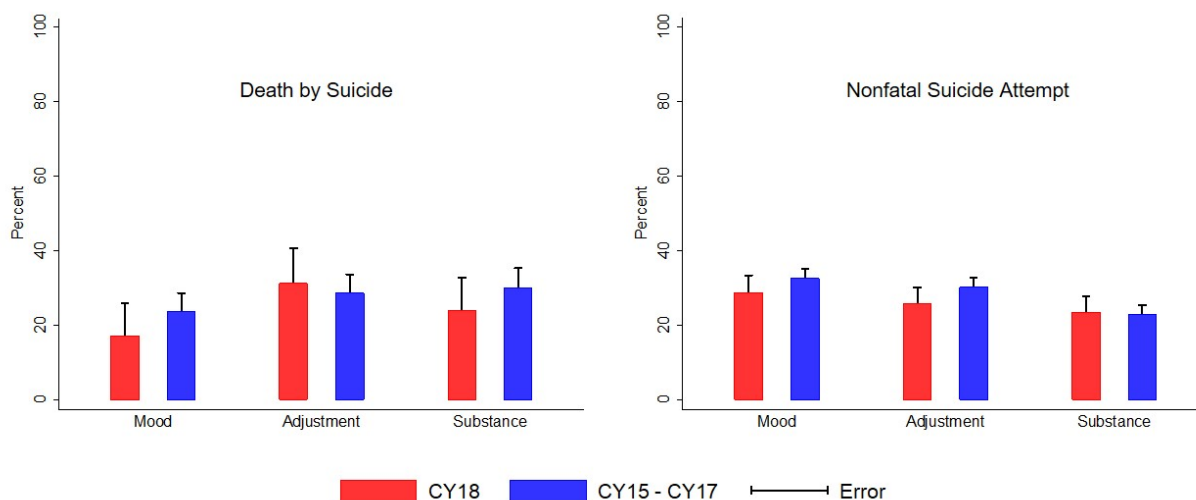


Figure 9. Percent of active-component DoDSER forms that indicated a history of mood, adjustment, or substance use disorders, by event type, CY15-CY18, U.S. Army.

Health Care Utilization

Regardless of whether or not an individual voluntarily disclosed – or was assessed for – suicidal thoughts, feelings, or behaviors, 58.9 percent of the soldiers who died by suicide in CY18 had been in contact with the MHS in the 90 days prior to death. The most common type of appointment was a general visit to a medical treatment facility (53.3 percent) and the second most common type was an outpatient mental health visit (38.3 percent). Outpatient mental health services were utilized in 37.4 percent of cases while inpatient mental health services were utilized in 11.2 percent of cases.

In total, 61.5 percent of the Army suicide-attempt DoDSER forms indicated contact with the MHS in the 90 days prior to the behavior. The most common type of appointment was a mental health visit (51.4 percent) and the second most common type was a general visit to a medical treatment facility (46.8 percent). Outpatient mental health services were utilized in 49.5 percent of cases while inpatient mental health services were utilized in 15.8 percent of cases.

Stressors

Among suicide DoDSER forms, relationship (42.1 percent), legal/administrative (31.8 percent), and work (17.8 percent) stressors within 90 days of the event were the most common stressors identified in CY18 (Figure 10). Similarly, among suicide-attempt DoDSER forms, relationship (34.5 percent), legal/administrative (32.7 percent), and work (29.7 percent) stressors were the most common stressors identified in CY18 (Figure 10). There were no statistically significant differences in the prevalence of these risk factors for either suicide or suicide-attempt DoDSER forms between CY18 and the CY15-CY17 average.

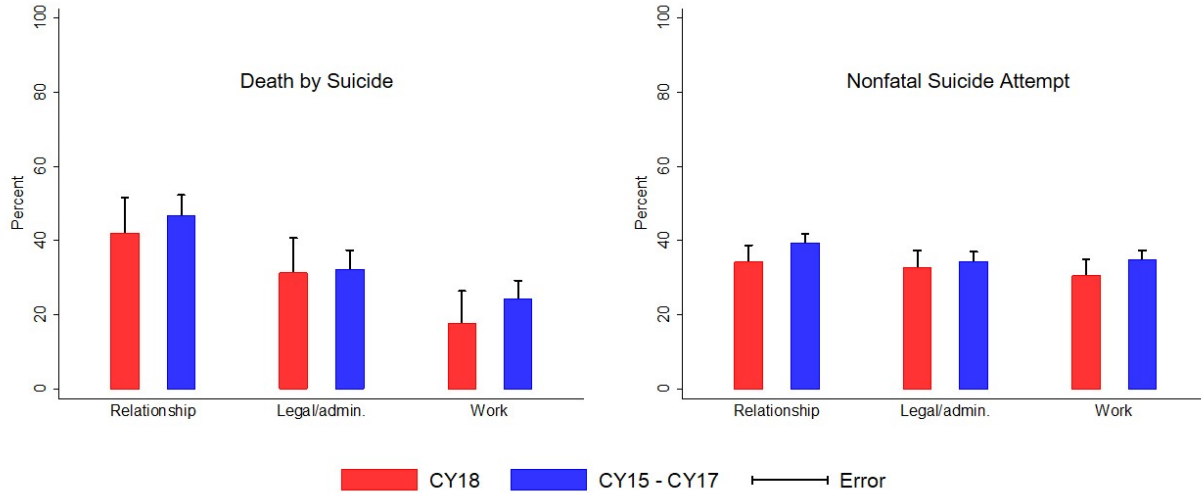


Figure 10. Percent of active-component DoDSER forms that indicated selected stressors within 90 days of the event, by event type, CY15-CY18, U.S. Army.

Chapter 6: DoDSER Summary - Active-Component U.S. Marine Corps

Introduction

This chapter presents an overview of the active-component U.S. Marine Corps suicide and suicide attempt data. Data for all events with a submitted DoDSER form are included in the descriptive summary and the data tables (Tables 10-17). Variables of particular interest are presented in the following text; however, the reader is encouraged to review the DoDSER data tables in Chapter 3 for additional information. This chapter presents case counts and proportions of the total number of cases observed; it does not present suicide rates, which are covered in Chapter 2.

Suicide Mortality

There were 46 active-component suicide deaths confirmed by the AFMES for CY18 as of January 31, 2019. For inclusion in this report, a DoDSER form was required for submission for these events by March 31, 2019. A total 45 of these forms were submitted. An additional 11 events that were either confirmed by AFMES after January 31 or were still pending a final determination as of January 31 had DoDSER forms submitted in time for inclusion in this report. Hence, the total number of deaths described in the corresponding tables and analyses equals 56.

Suicide Attempts

Over the course of CY18, DoDSER forms were submitted for 271 suicide attempts in 249 unique individuals.

Occurrence of Multiple Instances of Suicidal Behavior

Two suicide DoDSER forms were associated with one or more previously reported suicide attempt(s) that occurred between CY10 and CY18.

A total of 22 CY18 suicide-attempt DoDSER forms had one or more previous suicide attempt(s) recorded in the DoDSER system since CY10. The median number of days between the most recently reported suicide attempt and the penultimate attempt reported was 30.5 days.

Demographic Characteristics

The most common demographic profile among suicide DoDSER forms corresponded to a non-Hispanic, white male, aged 17-29 (39.3 percent). There was a pronounced difference in the proportion of males and females associated with each event type. Females accounted for 2.7 percent of suicide DoDSER forms and 21.4 percent of suicide-attempt DoDSER forms.

Method of Injury

Firearm use was the most common (64.3 percent) method of injury identified in suicide DoDSER forms. The majority (88.9 percent) of the firearms used were personal possessions. Relatively few firearm deaths (11.1 percent) resulted from the self-directed use of a military-issued firearm. There was no statistically significant difference in the proportion of firearm use as the method of injury among active-component DoDSER forms between CY18 and the CY15-CY17 average.

For suicide-attempt DoDSER forms, drug and/or alcohol overdose was the most frequently reported method of injury (58.8 percent). There was no statistically significant difference between the proportion of active-component suicide-attempt DoDSER forms in CY18 for which drug and/or alcohol overdose was the method of injury and the CY15-CY17 average.

Behavioral Health History

Among suicide DoDSER forms, 41.1 percent had at least one current or past behavioral health diagnosis in their medical record. Substance use disorders and mood disorders (25.0 percent each) were the most common diagnostic categories. Among Marine Corps suicide-attempt DoDSER forms, 56.6 percent had at least one current or past behavioral health diagnosis in their medical record. Mood disorders (26.8 percent) and substance use disorders (26.5 percent) were the most common diagnostic categories.

Figure 11 displays the prevalence of mood, adjustment, and substance abuse disorders among active component suicide and suicide-attempt DoDSER forms. There were no statistically significant differences between CY18 and the CY15-CY17 average for either suicide or suicide-attempt DoDSER forms.

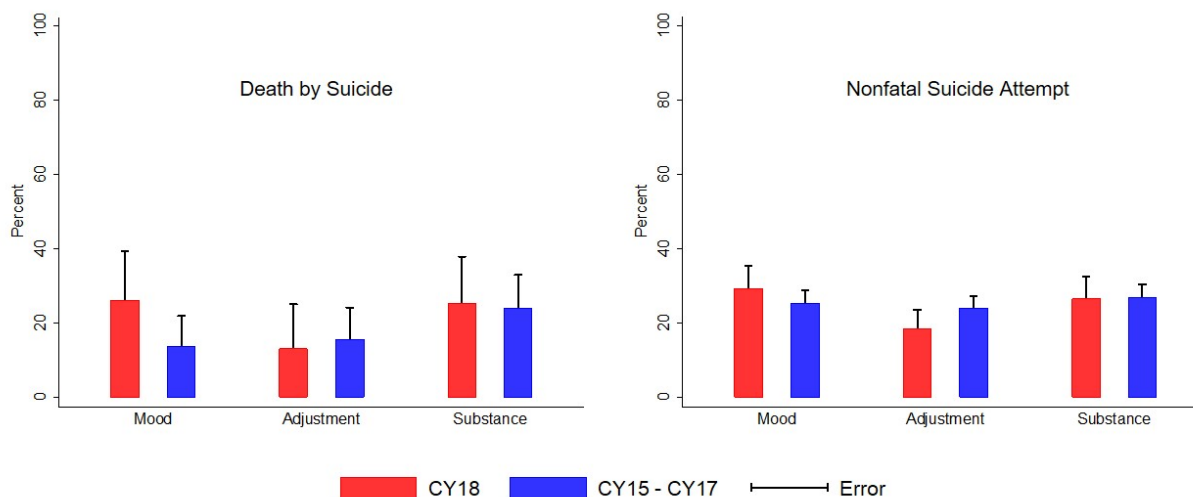


Figure 11. Percent of active-component DoDSER forms that indicated a history of mood, adjustment, or substance use disorders, by event type, CY15-CY18, U.S. Marine Corps.

Health Care Utilization

Regardless of whether or not an individual voluntarily disclosed – or was assessed for – suicidal thoughts, feelings, or behaviors, 51.8 percent of the Marines who died by suicide in CY18 had been in contact with the MHS in the 90 days prior to death (Table 14). The most common type of appointment was a general visit to a medical treatment facility (46.4 percent) and the second most common type was a mental health visit (32.1 percent). Outpatient mental health services were utilized in 32.1 percent of cases while inpatient mental health services were utilized in 7.1 percent of cases.

In total, 58.8 percent of the Marine Corps suicide-attempt DoDSER forms indicated contact with the MHS in the 90 days prior to the behavior (Table 15). The most common type of appointment was a general visit to a medical treatment facility (50.7 percent) and the second most common type was a mental health visit (44.1 percent). Outpatient mental health services were utilized in 44.1 percent of cases while inpatient mental health services were utilized in 13.2 percent of cases.

Stressors

Among suicide DoDSER forms, relationship (35.7 percent), legal/administrative (30.4 percent), and work (21.4 percent) stressors within 90 days of the event were the most common stressors identified in CY18 (Figure 12). Similarly, among suicide-attempt DoDSER forms, relationship (36.8 percent), legal/administrative (24.3 percent), and work (23.9 percent) stressors were the most common stressors identified in CY18 (Figure 12). There were no statistically significant differences in the prevalence of these risk factors for either suicide or suicide-attempt DoDSER forms between CY18 and the CY15-CY17 average.

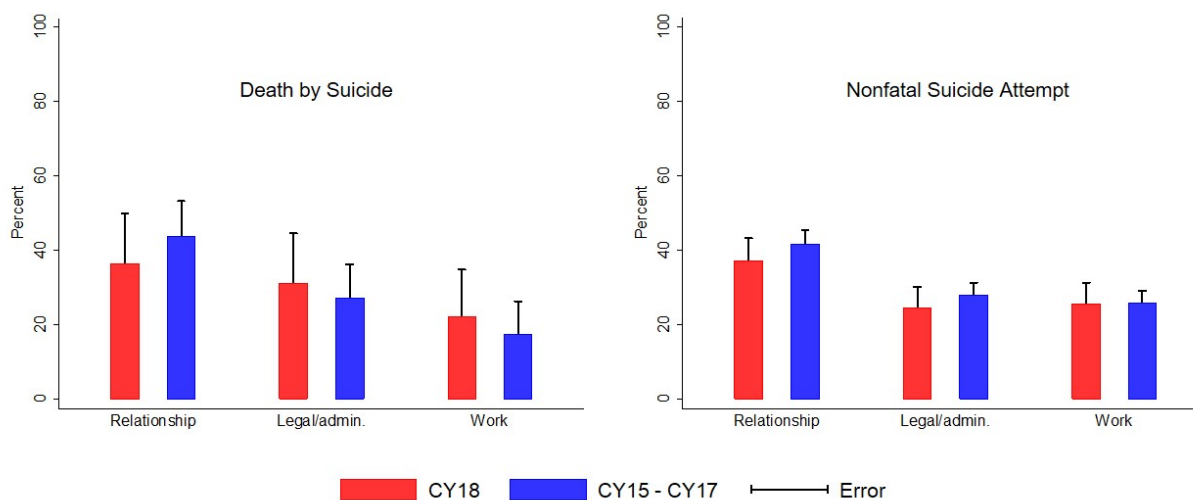


Figure 12. Percent of active-component DoDSER forms that indicated selected stressors within 90 days of the event, by event type, CY15-CY18, U.S. Marine Corps.

Chapter 7: DoDSER Summary - Active-Component U.S. Navy

Introduction

This chapter presents an overview of active-component U.S. Navy suicide and suicide attempt data. Data for all events with a submitted DoDSER form are included in the descriptive summary and the data tables (Tables 10-17). Variables of particular interest are presented in the following text; however, the reader is encouraged to review the DoDSER data tables in Chapter 3 additional information. This chapter presents case counts and proportions of the total number of cases observed; it does not present suicide rates, which are covered in Chapter 2.

Suicide Mortality

There were 54 active-component suicide deaths confirmed by the AFMES for CY18 as of January 31, 2019. For inclusion in this report, a DoDSER form was required for submission for these events by March 31, 2019. All 54 of these forms were submitted. An additional 13 events that were either confirmed by AFMES after January 31 or were still pending a final determination as of January 31 had DoDSER forms submitted in time for inclusion in this report. Hence, the total number of deaths described in the corresponding tables and analyses equals 67.

Suicide Attempts

Over the course of CY18, DoDSER forms were submitted for 230 suicide attempts in 218 unique individuals.

Occurrence of Multiple Instances of Suicidal Behavior

One suicide DoDSER form was associated with one or more previously reported suicide attempt(s) that occurred between CY10 and CY18.

A total of 19 CY18 suicide-attempt DoDSER forms had one or more previous suicide attempt(s) recorded in the DoDSER system since CY10. The median number of days between the most recently reported suicide attempt and the penultimate attempt reported was 70 days.

Demographic Characteristics

The most common demographic profile among suicide DoDSER forms corresponded to a non-Hispanic, white male, aged 17-29 (26.9 percent). There was a pronounced difference in the proportion of males and females associated with each event type. Females accounted for 10.3 percent of suicide DoDSER forms and 39.1 percent of suicide-attempt DoDSER forms.

Method of Injury

Firearm use was the most common (62.7 percent) method of injury identified in suicide DoDSER forms. The majority (97.6 percent) of the firearms used were personal possessions. Relatively few firearm deaths (2.4 percent) resulted from the self-directed use of a military-issued firearm. There was no statistically significant difference in the proportion of firearm use as the method of injury among active-component DoDSER forms between CY18 and the CY15-CY17 average.

For suicide-attempt DoDSER forms, drug and/or alcohol overdose was the most frequently reported method of injury (61.6 percent). There was no statistically significant difference between the proportion of active-component suicide-attempt DoDSER forms in CY18 for which drug and/or alcohol overdose was the method of injury and the CY15-CY17 average.

Behavioral Health History

Among suicide DoDSER forms, 40.3 percent had at least one current or past behavioral health diagnosis in their medical record. Substance use disorders (23.9 percent) and adjustment and mood disorders (17.9 percent each) were the most common diagnostic categories. Among Navy suicide-attempt DoDSER forms, 62.4 percent had at least one current or past behavioral health diagnosis in their medical record. Mood disorders (32.2 percent) and anxiety disorders (24.1 percent) were the most common diagnostic categories.

Figure 13 displays the prevalence of mood, adjustment, and substance abuse disorders among active component suicide DoDSER forms. There were no statistically significant differences between CY18 and the CY15-CY17 average for either suicide or suicide-attempt DoDSER forms.

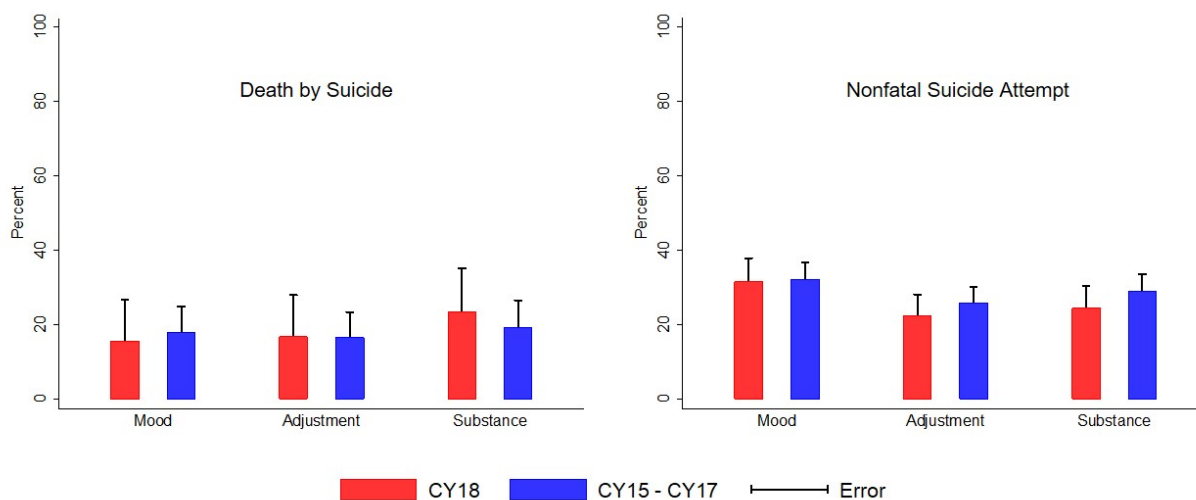


Figure 13. Percent of active-component DoDSER forms that indicated a history of mood, adjustment, or substance use disorders, by event type, CY15-CY18, U.S. Navy.

Health Care Utilization

Regardless of whether or not an individual voluntarily disclosed – or was assessed for – suicidal thoughts, feelings, or behaviors, 46.3 percent of the sailors who died by suicide in CY18 had been in contact with the MHS in the 90 days prior to death. The most common type of appointment was a general visit to a medical treatment facility (44.8 percent) and the second most common type was a mental health visit (22.4 percent). Outpatient mental health services were utilized in 22.4 percent of cases while inpatient mental health services were utilized in 7.5 percent of cases.

In total, 59.2 percent of the Navy suicide-attempt DoDSER forms indicated contact with the MHS in the 90 days prior to the behavior (Table 15). The most common type of appointment was an outpatient mental health visit (49.0 percent) and the second most common type was a general visit to a medical treatment facility (45.3 percent). Outpatient mental health services were utilized in 46.1 percent of cases while inpatient mental health services were utilized in 15.1 percent of cases.

Stressors

Among suicide DoDSER forms, relationship (35.8 percent), legal/administrative (35.8 percent), and work (16.4 percent) stressors within 90 days of the event were the most common stressors identified in CY18 (Figure 14). Similarly, among suicide-attempt DoDSER forms, relationship (42.9 percent), legal/administrative (29.4 percent), and work (35.5 percent) stressors were the most common stressors identified in CY18 (Figure 14). There were no statistically significant differences in the prevalence of these risk factors for either suicide or suicide-attempt DoDSER forms between CY18 and the CY15-CY17 average.

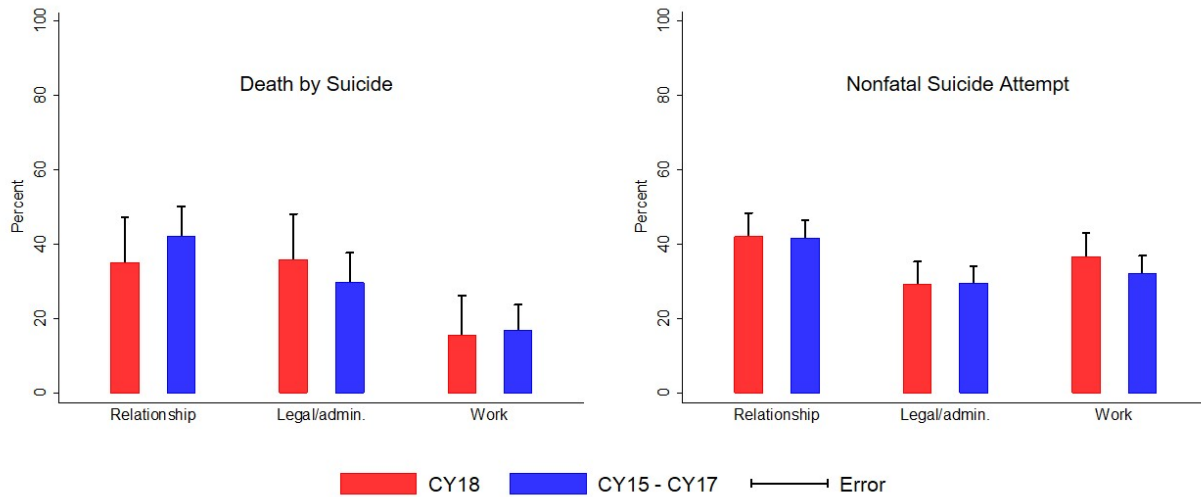


Figure 14. Percent of active-component DoDSER forms that indicated selected stressors within 90 days of the event, by event type, CY15-CY18, U.S. Navy.

Chapter 8: DoDSER Summary – Reserve Component

Introduction

This chapter presents an overview of reserve-component suicide and suicide-attempt DoDSER data. Data for all events with a submitted DoDSER form, regardless of duty status at the time of the event, are included in the descriptive summary and the data tables (Tables 18-21). The inclusion of all duty statuses was first fully implemented in CY18.

Suicide Mortality

There were 29 active-duty, reserve-component suicide deaths confirmed by the AFMES for CY18 as of January 31, 2019. For inclusion in this report, a DoDSER form was required for submission for these events by March 31, 2019. All 29 of these forms were submitted. DoDSER forms for events that occurred among reserve-component service members who were not in a duty status were also required in CY18. There were 95 forms submitted out of 187 events among those not in a duty status. Hence, the total number of deaths described in the following tables and analyses equals 124.

Suicide Attempts

Over the course of CY18, DoDSER forms were submitted for 121 suicide attempts in 115 unique individuals.

Method of Injury

Firearm use was the most common (79.8 percent) method of injury identified in suicide DoDSER forms. The majority (99.0 percent) of the firearms used were personal possessions. Relatively few firearm deaths (1.0 percent) resulted from the self-directed use of a military-issued firearm. Among suicide-attempt DoDSER forms, drug and/or alcohol overdose was the most frequently reported method of injury (51.2 percent).

Behavioral Health History

Among suicide DoDSER forms, 44.4 percent had at least one current or past behavioral health diagnosis in their medical record. Substance use disorders (29.0 percent) and mood disorders (15.3 percent) were the most common diagnostic categories. Among suicide-attempt DoDSER forms, 49.6 percent had at least one current or past behavioral health diagnosis in their medical record. Mood disorders (31.4 percent) and anxiety disorders (28.9 percent) were the most common diagnostic categories.

Health Care Utilization

Regardless of whether or not an individual voluntarily disclosed – or was assessed for – suicidal thoughts, feelings, or behaviors, 26.6 percent of reserve-component service members who died by suicide in CY18 had been in contact with the MHS in the 90 days prior to death. The most common type of appointment was a mental health visit (17.7 percent) and the second most common type was a general visit to a military treatment facility (16.9 percent). Outpatient mental health services were utilized in 16.1 percent of cases while inpatient mental health services were utilized in 5.6 percent of cases.

In total, 47.9 percent of the reserve-component suicide-attempt DoDSER forms indicated contact with the MHS in the 90 days prior to the behavior (Table 15). The most common type of appointment was a general visit to a medical treatment facility (41.3 percent) and the second most common type was a mental health visit (35.5 percent). Outpatient mental health services were utilized in 34.7 percent of cases while inpatient mental health services were utilized in 7.4 percent of cases.

Stressors

Among suicide DoDSER forms, relationship (45.2 percent), legal/administrative (21.8 percent), and work (21.0 percent) stressors within 90 days of the event were the most common stressors identified in CY18 (Figure 14). Similarly, among suicide-attempt DoDSER forms, relationship (42.1 percent), legal/administrative (21.5 percent), and work (33.9 percent) stressors were the most common stressors identified in CY18 (Figure 14).

Table 18. Demographic characteristics, reserve-component suicide and suicide-attempt DoDSER forms, CY18

	Suicide		Suicide Attempt	
	No.	%	No.	%
Sex				
Male	113	91.1	79	65.3
Female	11	8.9	42	34.7
Age				
17-19	5	4.0	16	13.2
20-24	38	30.6	40	33.1
25-29	37	29.8	19	15.7
30-34	11	8.9	17	14.0
35-39	13	10.5	11	9.1
40-44	10	8.1	8	6.6
45-59	10	8.1	10	8.3
Race				
American Indian/Alaska Native	3	2.4	0	0.0
Asian/Pacific Islander	2	1.6	7	5.8
Black/African American	12	9.7	24	19.8
White/Caucasian	97	78.2	87	71.9
Other/Unknown	10	8.1	3	2.5
Hispanic ethnicity				
Yes	14	11.3	18	14.9
No	110	88.7	103	85.1
Unknown	0	0.0	0	0.0
Education				
Less than high school	2	1.6	5	4.1
Alternative high school	12	9.7	6	5.0
High school graduate	71	57.3	67	55.4
Some college	27	21.8	24	19.8
4-year degree	10	8.1	14	11.6
Postgraduate	2	1.6	5	4.1
Unknown	0	0.0	0	0.0
Marital status				
Never married	69	55.6	66	54.5
Married	48	38.7	45	37.2
Legally separated	0	0.0	3	2.5
Divorced	7	5.6	7	5.8
Widowed	0	0.0	0	0.0
Other	0	0.0	0	0.0
Service				
Air Force	19	15.3	37	30.6
Army	76	62.3	45	37.2
Marine Corps	18	14.5	23	19.0
Navy	11	8.9	16	13.2
Subcomponent				
Reserve	35	28.2	61	50.4
National Guard	89	71.8	60	49.6
Rank/grade				
Cadet/midshipman	0	0.0	0	0.0
E1-E4	60	48.4	71	58.7
E5-E9	55	44.4	46	38.0
Warrant officer	1	0.8	0	0.0
Commissioned officer	8	6.5	4	3.3
Unknown	0	0.0	0	0.0

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Table 18 (cont). Demographic characteristics, reserve-component suicide and suicide-attempt DoDSER forms, CY18

DoD occupation group	Suicide		Suicide Attempt	
	No.	%	No.	%
Enlisted				
Infantry, gun crews, and seamanship specialists	30	24.2	5	4.1
Electronic equipment repairers	7	5.6	4	3.3
Communications and intelligence specialists	5	4.0	11	9.1
Health care specialists	10	8.1	12	9.9
Other technical and allied specialists	1	0.8	4	3.3
Functional support and administration	15	12.1	20	16.5
Electrical/mechanical equipment repairers	19	15.3	17	14.0
Craftworkers	7	5.6	4	3.3
Service and supply handlers	15	12.1	20	16.5
Non-occupational	6	4.8	20	16.5
Officer				
General officers and executives	0	0.0	0	0.0
Tactical operations officers	4	3.2	0	0.0
Intelligence officers	0	0.0	0	0.0
Engineering and maintenance officers	1	0.8	1	0.8
Scientists and professionals	0	0.0	1	0.8
Health care officers	1	0.8	0	0.0
Administrators	2	1.6	2	1.7
Supply, procurement, and allied officers	1	0.8	0	0.0
Non-occupational	0	0.0	0	0.0
Unknown	0	0.0	0	0.0
Number of deployments				
0	82	66.1	79	65.3
1	27	21.8	18	14.9
2	9	7.3	11	9.1
3 or more	6	4.8	10	8.3
Unknown	0	0.0	3	2.5

Table 19. Event characteristics, reserve-component suicide and suicide-attempt DoDSER forms, CY18

	Suicide		Suicide attempt	
	No.	%	No.	%
Event location country				
United States	121	97.6	110	90.9
Korea	0	0.0	0	0.0
Japan	0	0.0	0	0.0
Germany	0	0.0	0	0.0
United Kingdom	0	0.0	0	0.0
Other	3	2.4	7	5.8
Unknown	0	0.0	4	3.3
Event setting				
Own residence	63	50.8	61	50.4
Barracks	2	1.6	32	26.4
Residence of friend or family	22	17.7	5	4.1
Work/jobsite	2	1.6	3	2.5
Automobile	14	11.3	6	5.0
Inpatient medical facility	0	0.0	0	0.0
Hotel	3	2.4	5	4.1
Other	18	14.5	7	5.8
Unknown	0	0.0	2	1.7
Method of injury				
Drug/alcohol	6	4.8	62	51.2
Hanging/asphyxiation	16	12.9	25	20.7
Poison	0	0.0	4	3.3
Firearm	99	79.8	9	7.4
Military-issued	1	0.8	2	1.7
Personally-owned	98	79.0	7	5.8
Of unknown provenance	3	2.4	18	14.9
Trauma	0	0.0	0	0.0
Other	0	0.0	3	2.5
Unknown				
Alcohol used during event				
Yes	41	33.1	37	30.6
Yes	46	37.1	75	62.0
No	37	29.8	9	7.4
Unknown				
Drugs used during event				
Yes ¹	17	13.7	53	43.8
Drugs (illicit/illegal)				
Used, overdose	5	4.0	3	2.5
Used, no overdose	5	4.0	5	4.1
Prescription medications				
Used, overdose	5	4.0	29	24.0
Used, no overdose	6	4.8	9	7.4
Non-prescription medications				
Used, overdose	0	0.0	15	12.4
Used, no overdose	3	2.4	2	1.7
No	68	54.8	60	49.6
Unknown	39	31.5	8	6.6

Continued on next page

Table 19 (cont). Event characteristics, reserve-component suicide and suicide-attempt DoDSER forms, CY18

	Suicide		Suicide Attempt	
	No.	%	No.	%
Communicated intent for self-harm				
Yes ¹	42	33.9	32	26.4
Spouse	20	16.1	11	9.1
Friend	15	12.1	10	8.3
Mental health staff	3	2.4	5	4.1
No	82	66.1	86	71.1
No known history	0	0.0	3	2.5
Is there evidence the event involved death-risk gambling?				
Yes	7	5.6	12	9.9
No	111	89.5	104	86.0
Unknown	6	4.8	5	4.1
Is there evidence the event was planned and/or premeditated?				
Yes	47	37.9	28	23.1
No	67	54.0	81	66.9
Unknown	10	8.1	12	9.9
Event observable				
Yes	24	19.4	45	37.2
No	98	79.0	68	56.2
Unknown	2	1.6	8	6.6
Left a suicide note				
Yes	32	25.8	18	14.9
No	84	67.7	99	81.8
Unknown	8	6.5	4	3.3
Residence at time of event				
Barracks	2	1.6	35	28.9
BEQ/BOQ	0	0.0	1	0.8
On-base family housing	1	0.8	3	2.5
Off-base	116	93.5	75	62.0
Ship	0	0.0	0	0.0
Other	3	2.4	6	5.0
Unknown	2	1.6	1	0.8
Resided alone at time of event				
Yes	36	29.0	28	23.1
No	84	67.7	87	71.9
Unknown	4	3.2	6	5.0
Children resided with service member				
Yes	24	19.4	23	19.0
No	24	19.4	22	18.2
NA	70	56.5	74	61.2
Unknown	6	4.8	2	1.7
Gun in home/immediate environment				
Yes	101	81.5	23	19.0
No	18	14.5	88	72.7
Unknown	5	4.0	10	8.3

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Table 19 (cont). Event characteristics, reserve-component suicide and suicide-attempt DoDSER forms, CY18

	Suicide		Suicide Attempt	
	No.	%	No.	%
Duty environment ¹				
Permanent command/garrison	47	37.9	56	46.3
Leave	4	3.2	0	0.0
Temporary duty assignment	2	1.6	3	2.5
Deployed	2	1.6	6	5.0
Training	5	4.0	22	18.2
Not in a duty status	93	75.0	31	25.6
Other	64	51.6	33	27.3

¹Subcategories are not mutually exclusive.

Table 20. Physical and mental health characteristics, reserve-component suicide and suicide-attempt DoDSER forms, CY18

	Suicide		Suicide Attempt	
	No.	%	No.	%
Any mental health diagnosis				
Yes ¹	55	44.4	60	49.6
Mood	19	15.3	38	31.4
Anxiety	18	14.5	35	28.9
Adjustment	11	8.9	14	11.6
Substance use	36	29.0	20	16.5
No/no known history	69	55.6	59	48.8
Unknown	0	0.0	2	1.7
History of sleep disorder				
Yes	13	10.5	9	7.4
No/no known history	111	89.5	110	90.9
Unknown	0	0.0	2	1.7
History of traumatic brain injury				
Yes	3	2.4	4	3.3
No/no known history	121	97.6	115	95.0
Unknown	0	0.0	2	1.7
Family history of mental illness				
Yes	11	8.9	34	28.1
No/no known history	113	91.1	85	70.2
Unknown	0	0.0	2	1.7
Prior self-injury				
Yes	14	11.3	25	20.7
One prior event	11	8.9	12	9.9
More than one prior event	3	2.4	12	9.9
Most recent event similar to current event	6	4.8	16	13.2
No/no known history	110	88.7	93	76.9
Unknown	0	0.0	3	2.5
Taken psychotropic medications				
Yes	25	20.2	38	31.4
No/no known history	99	79.8	81	66.9
Unknown	0	0.0	2	1.7
Use of psychotropic medications, last 90 days				
Yes ¹	17	13.7	26	21.5
Antidepressants	14	11.3	20	16.5
Anxiolytics	7	5.6	16	13.2
Antimanic	0	0.0	0	0.0
Anticonvulsant	2	1.6	3	2.5
Antipsychotic	3	2.4	5	4.1
Sleep medication	7	5.6	6	5.0
No/no known history	107	86.3	93	76.9
Unknown	0	0.0	2	1.7

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Table 20 (cont). Physical and mental health characteristics, reserve-component suicide and suicide-attempt DoDSER forms, CY18

	Suicide		Suicide Attempt	
	No.	%	No.	%
Pain medication use				
Yes	7	5.6	13	10.7
History of opioid use	5	4.0	4	3.3
No/no known history	117	94.4	106	87.6
Unknown	0	0.0	2	1.7
Health/social services, last 90 days				
Yes ¹	33	26.6	58	47.9
Medical treatment facility	21	16.9	50	41.3
Substance abuse services	4	3.2	10	8.3
Family assistance program	1	0.8	0	0.0
Mental health services ¹	22	17.7	43	35.5
Outpatient	20	16.1	42	34.7
Inpatient	7	5.6	9	7.4
No/no known history	91	73.4	61	50.4
Unknown	0	0.0	2	1.7

¹Subcategories are not mutually exclusive.

Table 21. Contextual factors, reserve-component suicide and suicide-attempt DoDSER forms, CY18

	Suicide		Suicide Attempt	
	No.	%	No.	%
Failed or failing relationship, last 90 days				
Yes ¹	56	45.2	51	42.1
Intimate relationship	52	41.9	49	40.5
Other relationship	14	11.3	12	9.9
No/no known history	68	54.8	68	56.2
Unknown	0	0.0	2	1.7
Friend and family stressors, last 90 days				
Yes ¹	7	5.6	12	9.9
Death of spouse or other family member (manner other than suicide)	3	2.4	6	5.0
Death of friend (manner other than suicide)	2	1.6	4	3.3
Serious illness of friend or family member	2	1.6	4	3.3
No/no known history	117	94.4	107	88.4
Unknown	0	0.0	2	1.7
History of friend or family death by suicide				
Yes ¹	20	16.1	17	14.0
Spouse	1	0.8	0	0.0
Family other than spouse	9	7.3	11	9.1
Friend	13	10.5	7	5.8
No/no known history	104	83.9	102	84.3
Unknown	0	0.0	2	1.7
Administrative/legal problems, last 90 days				
Yes ¹	27	21.8	26	21.5
Courts martial proceedings	0	0.0	0	0.0
Article 15/Non-judicial punishment	2	1.6	4	3.3
Administrative separation proceedings	3	2.4	7	5.8
Away without leave/deserter status	5	4.0	6	5.0
Medical evaluation board proceedings	4	3.2	3	2.5
Civil legal proceedings	10	8.1	6	5.0
Non-selection for promotion	3	2.4	4	3.3
Under investigation	4	3.2	6	5.0
No/no known history	97	78.2	93	76.9
Unknown	0	0.0	2	1.7
Excessive debt/bankruptcy, last 90 days				
Yes	12	9.7	15	12.4
No/no known history	112	90.3	104	86.0
Unknown	0	0.0	2	1.7
Workplace difficulties, last 90 days				
Yes ¹	26	21.0	41	33.9
Job problems	22	17.7	34	28.1
Supervisor/coworker issues	1	0.8	16	13.2
Poor performance review	5	4.0	9	7.4
Unit/workplace hazing	0	0.0	3	2.5
No/no known history	98	79.0	78	64.5
Unknown	0	0.0	2	1.7

Continued on next page

Table 21 (cont). Contextual factors, reserve-component suicide and suicide-attempt DoDSER forms, CY18

	Suicide		Suicide Attempt	
	No.	%	No.	%
Abuse, assault, or harassment victimization, last year				
Yes ¹	6	4.8	15	12.4
Physical abuse or assault	3	2.4	4	3.3
Sexual abuse or assault	0	0.0	3	2.5
Emotional abuse	3	2.4	13	10.7
Sexual harassment	1	0.8	7	5.8
No/no known history	118	95.2	104	86.0
Unknown	0	0.0	2	1.7
Abuse, assault, or harassment perpetration, last year				
Yes ¹	9	7.3	5	4.1
Physical abuse or assault	7	5.6	3	2.5
Sexual abuse or assault	2	1.6	0	0.0
Emotional abuse	7	5.6	1	0.8
Sexual harassment	2	1.6	1	0.8
No/no known history	115	92.7	114	94.2
Unknown	0	0.0	2	1.7

¹Subcategories are not mutually exclusive.

Appendix A: Methods - DoDSER Data Processes

Case Definitions and Verification

Suicide Case Criteria

Any death among a service member in the active component or the Selected Reserve (SELRES), irrespective of duty status, where the manner of death was ruled a suicide or was strongly suspected to be a suicide (but not definitively ruled as such by the time this report was written) was eligible for inclusion in this report. To conform to the definition of end-strength used in suicide rate calculations (Appendix F), suicide cases of service members in a permanent absent without leave or deserter status were excluded from this report.¹

Suicide Case Verification

For each DoDSER Annual Report, AFMES determines an official case list of suicides among service members in the active component and in the SELRES. AFMES collates data for suicides among SELRES members not in a duty status from the military service-specific Suicide Prevention Program Manager (SPPM) reports for the Air Force, Army, Marine Corps, and Navy. The official case list is used in the reporting and analysis of annual suicide mortality rates. This list is also used to validate submitted DoDSER forms for deaths by suicide.

Suicide Attempt Case Criteria

To be included in the CY18 DoDSER Annual Report, each suicide attempt case must have:

1. Occurred between January 1, 2018, and December 31, 2018, and
2. Met the DoDSER definition of a suicide attempt, which is a self-inflicted, potentially injurious behavior with a non-fatal outcome for which there was evidence (either explicit or implicit) of intent to die

Suicide Attempt Case Verification

At the time that this report was written, no formal verification process existed for suicide attempt cases.

Data Collection and Entry

All military services collect data about confirmed suicides among service members in the active component, confirmed suicides among members of the SELRES regardless of duty status, and suicide attempts. The Army also collects data about and submits DoDSER forms for other nonfatal events, such as nonsuicidal self-injury and suicidal ideation.

Common Sources for Data Collection

Trained behavioral health providers and command officials on military installations and at medical treatment facilities collect data for each case of suicide and suicide attempt. Common sources of data for these cases include:

- Medical records

- Behavioral health records
- Personnel records
- Legal and/or investigative records
- Interviews with command officials
- Interviews with spouses, extended family, friends, and/or peers (if authorized)

For cases of suicide attempt, informed consent is sought to conduct a direct interview of the service member who made the attempt. Data collected by direct interview can be submitted via a DoDSER form.

Data Entry for DoDSER Forms

Trained users input data directly into the DoDSER system via a web-based form, available through a secure DoD website (<https://dodser.t2.health.mil/>). Standardized coding guidance was available during data entry, along with technical definitions of terms and item-by-item “help” text designed to aid in accurate reporting.

Reporting Timelines for Suicides

All military services track suicides via the offices of each service’s SPPM in order to meet reporting timelines. However, as no data collection processes are specified in DoD Instruction 6490.16, these processes can vary between military services². The basic process for each service is as follows:

- Air Force: The Integrated Resilience Office receives the AFMES notification for a suicide death and contacts the corresponding major command’s Behavioral Health Consultant. The Consultant then contacts the responsible Air Force Mental Health Clinic and requests that a clinician complete and submit the DoDSER form within 60 days.
- Army: The DoDSER Program Manager at the DHA Armed Forces Health Surveillance Branch Supporting Behavioral and Social Health Outcomes Practice receives the AFMES notification, contacts the behavioral health point of contact (POC) at the service member’s assigned medical treatment facility, and requests that a behavioral health clinician complete and submit a DoDSER form within 60 days.
- Navy: Following confirmation from AFMES, the SPPM’s office at the Navy’s 21st Century Sailor Office's Suicide Prevention Branch contacts the local command and requests that an appropriate POC complete and submit a DoDSER form within 60 days.
- Marine Corps: The DoDSER Program Manager, located within the Marine Corps Headquarters’ Suicide Prevention Section and Behavioral Health Branch, contacts the local command and requests that an appropriate POC complete and submit a DoDSER form within 15 working days.
- National Guard Bureau: Upon identification or acknowledgment that a suicide has occurred, information related to the suicide event is gathered and entered into the

DoDSER System. Forms are completed and submitted by the DoDSER Program Manager, SPPM, or Director of Psychological Health.

Reporting Timelines for Suicide Attempts

In cases involving nonfatal events, such as suicide attempts, the military services complete a suicide-attempt DoDSER form within 30 days of the date when the attempt was identified.

Data Augmentation

After a DoDSER form is submitted, additional information is obtained from enterprise sources in an effort to improve overall data completeness and accuracy. Data sources and the types of data they provide include the following:

- AFMES provides data about the official manner and cause of death as well as official demographic for suicides among service members. These data come from military or civilian autopsy reports, death certificates, written reports from military investigative agencies, or a verbal report from a civilian death investigator or coroner.
- DMDC provides demographic data from the Defense Enrollment Eligibility Reporting System for all events submitted to the DoDSER system. DMDC also provides deployment data from the Contingency Tracking System, the repository of official deployment-related information.

Data Quality

The quality of the data entered into the DoDSER system is of paramount importance. The system uses several types of controls to ensure an overall high level of data quality. Some of these controls are:

- Form-field validation that requires users to adjudicate responses that are not logically possible (e.g., date of birth must be at least 17 years in the past).
- “Low data quality” flags for forms that are less than 80 percent complete. A flagged form warns the user that submitting the form will count against the service’s overall level of DoDSER compliance.
- Corroboration of DoDSER suicide cases against data from AFMES ensures that suicide cases are valid and present in both independent systems. If a suicide case is present in the DoDSER system without a corresponding AFMES report, it will not be included in the analytics of the DoDSER Annual Report.
- Identification of potential duplicate suicide event submissions by the DoDSER system helps to ensure that only one submitted form exists for each event. The military services’ DoDSER program managers select the submission that represents the most accurate and complete data.

- Review of open-ended text fields and the selection of the “Other” response option allows for the identification of text responses that correspond well with the form’s existing response options.
- Checking of DoDSER data against data from AFMES and DMDC improves the accuracy of DoDSER data. If data submitted via the DoDSER form differ from the information received from AFMES or DMDC, then the DoDSER data are replaced with the information contained in the AFMES or DMDC records.
- Provision of “help” text that informs users about the definitions and parameters relevant to each question – including relevant diagnostic codes and identification of data sources relevant to a given item. This “help” text is available as a separate “pop-up” window for each item on the DoDSER form, which means that the user does not need to navigate away from the data collection page to use the help text.

Finalization of the Dataset

DoDSER forms for all confirmed suicide deaths must be submitted by the services no later than March 31 of the following year. This deadline is 60 days after AFMES’ suicide confirmation deadline of January 31 of the following year. Accordingly, the DoDSER dataset used to generate this CY18 Annual Report was finalized (i.e., closed to new data) on April 1, 2019.

References and Notes

1. For more information on the DoDSER System, see the System of Record Notice (April 15, 2016, 81 FR 22240) at <https://dpcl.d.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570683/edha-20-dod>
2. DoD Instruction 6490.16, “Defense Suicide Prevention Program,” November 6, 2017.

Appendix B: Methods - Suicide Mortality Rates

This appendix will provide a review of the methods for defining, calculating, standardizing, and analyzing suicide mortality rates. Note that official military suicide mortality rates for the calendar year are provided to the DoDSER team by AFMES. The DoDSER team then standardizes these rates to allow for comparisons between the military and general U.S. adult populations.

Definition of a Suicide Mortality Rate

Suicide mortality rates provide information on the occurrence of death by suicide over a defined period. The rates are based on both the number of suicides that occurred and the size of the population at risk for the event. The crude (descriptive) rates (which are not adjusted for any demographic characteristics) are expressed as a number of events per 100,000 persons at risk. This scale allows for the rate to be expressed as a whole number of deaths to ease interpretation (e.g., 0.02% = 0.0002 and $0.0002 * 100,000 = 20$ deaths per 100,000 persons).

Calculation of a Suicide Mortality Rate

DoD policy states that a CY suicide rate can be calculated no sooner than 90 days after the end of the CY to allow for resolution of case determinations.¹ March 31 serves as the final reporting date for cases used in the previous CY's annual rate calculations and for the previous CY's aggregate data from the DoDSER system.

DoD Instruction 6490.16 dictates rate calculation procedures. DoD data standards prohibit reporting rates associated with fewer than 20 instances of suicide because a high degree of statistical instability occurs in rates calculated from small numerators.^{1,2} Overall and stratified rates are calculated separately for the following:

- The active component (in aggregate and individually for each service)
- The reserve component of the SELRES (regardless of duty status; in aggregate and individually for each service)
- The National Guard component of the SELRES (regardless of duty status; in aggregate and individually for the Air Guard and Army Guard)

Stratified rates are calculated for sex, race, ethnicity, education, marital status, age, and rank/grade within these components. AFMES collaborates with DMDC to identify the number of service members in each combination of military service, component, and demographic characteristic at the end of each month; these totals are the "monthly end-strengths." The average of the monthly end-strengths for the CY is the denominator for the rate calculations.

Mathematical Formula

The following formula provides a mathematical expression of the rate calculation:

$$\text{Rate} = \frac{12s_g}{\sum_{m=1}^{12} ES_{mg}} \times 100,000$$

In this formula, s_g represents the number of suicides in a particular population group and ES_{mg} represents the end-strength of a particular month for the same population group. The populations (g) used in each rate calculation correspond to the service and component groups described above.

Standardization of a Suicide Mortality Rate

Rate standardizations for each DoDSER Annual Report are implemented using U.S. population data from the Centers for Disease Control and Prevention (CDC) Web-Based Injury Statistics Query and Reporting System (WISQARS).³ The CDC maintains WISQARS and provides aggregate data for fatal and nonfatal injuries.

CY17 data were the most current population data available from CDC WISQARS for the CY18 DoDSER Annual Report. For CY17, rates of suicide in the U.S. population were jointly stratified by age group (17–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59) and sex (male, female) for each calendar year.

The technique of indirect standardization allows for calculation of the number of expected suicides in the military population given the adult U.S. population age- and sex-specific stratum rates. This technique was used to calculate the number of expected cases in each age- and sex-specific stratum of the component and service subpopulations. Indirect standardization is preferred to direct standardization when the number of events within strata of the target population (i.e., the military) are very small.⁴

Division of the observed number of suicides by the total number of expected suicides yields the standardized mortality ratio (SMR). The mathematical formula for the SMR is:⁴

$$\text{SMR} = \frac{\sum_i p_{ia} n_{ia}}{\sum_i p_{is} n_{ia}}$$

- p_{ia} —Represents the stratum-specific rate for the study population (i.e., the specific component or military service under consideration)
- n_{ia} —Represents the number of service members in that stratum
- p_{is} —Represents the stratum-specific rate from the standard population (in this instance, the U.S. population)

The product of p_{ia} and n_{ia} gives the observed number of suicides within each stratum. The sum of the observed numbers across the strata yields the numerator for the formula. The product of p_{is} and n_{ia} yields the number of expected suicides for that stratum. The sum across the strata is the total number of expected suicides. Multiplication of the SMR by the crude rate of the standard population produces the adjusted rate for the population of interest.

Practical Example of Indirect Rate Standardization

Table 18 provides a practical example of this indirect method of rate adjustment. The data used in Table 18 are for the active component suicide rates from all military services combined for CY12. Data for the current calendar year are provided in Chapter 2.

The sum of the expected deaths column (the denominator of the SMR formula) is 289.782. The numerator of the SMR formula uses the same value as the total number of observed suicides for the time-period: 321. Division of 321 by 289.782 yields the SMR of 1.11. Multiplication of the SMR by the unadjusted rate for the standard population (.000165) gives the adjusted rate of .000183. This value is then multiplied by 100,000 to convert it into the more easily interpretable value of 18.3 suicides per 100,000 members of the population of interest.

Table 22. Demonstration of the calculation of the age- and sex-adjusted suicide rate using the indirect method for the active component, all military services, CY12

Stratum	CY12 Service-Aggregated Denominator (n_{ia})	CY12 U.S. Population Rate (p_{is})	Expected Deaths ($n_{ia}p_{is}$)
Male, 17–19	67726	.000153	10.362
Male, 20–24	375972	.000221	83.090
Male, 25–29	296051	.000240	71.052
Male, 30–34	188920	.000228	43.074
Male, 35–39	137064	.000248	33.992
Male, 40–44	87498	.000266	23.274
Male, 45–49	33105	.000288	9.534
Male, 50–54	8912	.000315	2.807
Male, 55–59	2082	.000309	0.643
Female, 17–19	13382	.000039	0.522
Female, 20–24	67558	.000049	3.310
Female, 25–29	52184	.000056	2.922
Female, 30–34	32318	.000062	2.004
Female, 35–39	20794	.000072	1.497
Female, 40–44	12161	.000082	0.997
Female, 45–49	4869	.000100	0.487
Female, 50–54	1603	.000104	0.167
Female, 55–59	513	.000091	0.047

Adjusted rates allow for comparisons between the military population and the general U.S. population after accounting for known differences in the distribution of age and sex between the two populations.

The 95 percent CIs associated with the adjusted rates were calculated using the Poisson distribution. Formally, a 95 percent CI relates to the probability that the end points of the interval cover the true value being estimated.⁵ Assuming multiple generations of the data and subsequent analysis, 95 percent of the CIs will cover the true value. If the span of the CI for the military population does not overlap with the U.S. population rate (estimated with very little random error), then one can conclude that there is a statistically significant difference between the military and the adult U.S. rates.

The use of indirect standardization limits the comparisons to just those involving the population of interest against expected rates in the adult U.S. population. Within a particular year, it is not possible to compare the SMRs, or associated adjusted rates, between components or military services because the age and sex distributions will differ between the subpopulations.

Data Analyses

Suicide Mortality Rate Data Analyses

To compare the rates of suicide between years and between components and military services within a single year while accounting for different age and sex distributions, the DoDSER team conducted a separate set of analyses using a Poisson regression model.⁶ This model is used with count data, such as the number of deaths in a particular group. Linear combinations of model estimates produced adjusted rates for temporal comparisons and statistical inference. Two approaches to the analysis, both of which account for volatility in the rates, were implemented: a comparison of CY18 to the three-year average suicide mortality rate of CY15-CY17 and a test of linear trend over the period of CY11-CY18.

Data Analyses for DoDSER Variables

The majority of the CY18 DoDSER Annual Report describes the prevalence of suspected risk factors associated with the occurrence of suicide and suicide attempts among service members. Statistical comparisons of a limited set of variables have also been included to examine change over time within suicide and suicide-attempt DoDSER forms. These comparisons examine the stability of risk distributions over time. Binomial regression models were used to compare CY18 suicide and suicide-attempt DoDSER results to results from CY15-CY17. The three-year average for CY15-CY17 was used to provide a more stable statistical comparison.

The specific variables included in the comparative analyses were:

- Method of injury (e.g., firearm use, asphyxiation, drug or alcohol overdose)
- Presence of a mood disorder⁷
- Presence of an anxiety disorder⁷
- Presence of adjustment disorder⁷
- History of substance abuse
- History of prior self-injury
- Use of psychotropic medications in the 90 days prior to the event
- Relationship problems in the 90 days prior to the event
- Legal/administrative problems in the 90 days prior to the event
- Workplace issues in the 90 days prior to the event

These variables were selected for the current report because of their prominence in the suicide research literature as major determinants of suicide and suicide attempts. Each model was adjusted for age and sex. Full information maximum likelihood estimation was used to account for missing data.⁸ For individuals with multiple suicide attempts or with both an attempt and a suicide death in the CY15-CY18 DoDSER data, only the most recent report was retained for analysis to satisfy the assumption of independent observations in the regression model.

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Appendix C: Glossary

Unless otherwise noted, these terms and their definitions are for the purpose of this report.

Active Component	Per the Office of the Chief Management Officer, the active component is, “the portion of the armed forces as identified in annual authorization acts as ‘active forces,’ and in section 115 of Title 10 USC as those active duty personnel paid from funds appropriated for active duty personnel.”
Article 15	A provision under the Uniform Code of Military Justice that gives commanding officers the ability to impose non-judicial punishment upon service members within their units who commit minor offenses.
Confidence Interval (95%)	“Over the collection of all 95 percent confidence intervals that could be constructed from repeated random samples of size n , 95 percent will contain the parameter μ .” ¹ Said another way, it is a range of values so defined that there is a 95 percent probability that the value of a parameter lies within it.
Contextual Factor	A factor that reflects a particular context of an individual or group.
Death-Risk Gambling	Any game of chance with death or serious injury as a potential outcome. Example includes “Russian roulette.”
Deployment	Per the Office of the Chairman of the Joint Chiefs of Staff, a deployment is defined as “a troop movement resulting from a Joint Chiefs of Staff (JCS)/combatant command deployment order for 30 continuous days or greater to a location outside the U.S. This deployment location does not have permanent U.S. military medical treatment facilities (i.e., funded by the Defense Health Program) and may or may not be directly supported by deployed medical forces.” Service members who deployed and had at least one location identified as part of Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF) or Operation New Dawn (OND) were considered to have been OEF/OIF/OND-deployed. Per the RAND report “Army Deployments to OIF and OEF” published in 2010, the identified locations included: Afghanistan, Bahrain, Djibouti, Iraq, Kuwait, Kyrgyzstan, Oman, Qatar, Saudi Arabia and Uzbekistan. Additionally, the sea boundaries of the Red Sea, the Gulf of Aden, the Gulf of Oman and the Arabian Sea, north of the 10°N latitude and west of the 68°E longitude and the air space over all countries and sea boundaries listed here.

DoDSER Annual Report	A yearly summary providing a descriptive report of data from the United States Armed Forces on the occurrence of suicide and suicide attempts between January 1 and December 31 each year.
DoDSER Form	The DoDSER data-collection form utilized by each service to collect a core set of standardized data elements, as well as a set of service-specific items, regarding cases of suicide and suicide attempt.
DoDSER System	A secure web-based data-collection program, available at https://dodser.t2.health.mil , through which DoDSER forms are completed and submitted.
Duty Status	Service members are considered to be in a duty status if they are members of the active component and are not identified as being absent without leave or in a deserter status. Per the Office of the Assistant Secretary of Defense for Reserve Affairs, service members of the Selected Reserve are also considered to be in a duty status if they are identified as currently engaged in drill or training, or in the Simultaneous Membership Program, active National Guard/reserve, or Full-Time Support roles.
Medical Evaluation Board	An informal proceeding evaluating the medical history of a service member to determine how the injury and/or disease will respond to treatment protocols. This is used to determine if the medical condition and/or physical defect will render the service member unfit for duty. ^{2,3}
Military Services	The military services included in this report include the Army, Navy, Air Force, and Marine Corps. At this time, the Coast Guard is not included in the DoDSER surveillance system.
Planned and/or Premeditated	Evidence that the event was planned and/or premeditated includes verbal discussion of a plan, written notes, e-mail and/or chat-room discussion, or other evidence of a plan such as preparatory behaviors (e.g., giving possessions away, purchase of materials to facilitate suicide, etc.).
Protective Factors	Factors that stem from physical, psychological, spiritual, family, social, financial, vocational, and emotional well-being; i.e., factors that make it less likely that individuals will develop a disorder. Protective factors may encompass biological, psychological, or social factors in the individual, family, and environment. ⁴
Psychotropic Medication	A type of medication that directly affects mental, emotional, and behavioral states when consumed by an individual. Such medications are used to treat disorders such as depression or bipolar disorder.

Risk Factors	Characteristics, variables, or hazards that make it more likely that individuals will develop self-injurious behaviors. Risk factors may encompass biological, psychological, or social factors in the individual, family, and environment. ⁴
Selected Reserve	Per the Office of the Assistant Secretary of Defense for Reserve Affairs, the Selected Reserve “consists of those units and individuals within the Ready Reserve designated by their respective military services and approved by the Chairman of the Joint Chiefs of Staff, as so essential to initial wartime missions that they have priority over all other reserves.” All selected reservists are in an active status, but not necessarily a duty status. This category includes all National Guard and reserve personnel who have Selected Reserve agreements, whether trained or not.
Self-Harm (Without Intent to Die)	A self-inflicted, potentially injurious behavior for which there is evidence (either implicit or explicit) that the person did not intend to kill himself or herself (i.e., had no intent to die). ⁴
Sexual Assault	Intentional sexual contact characterized by use of force, threats, intimidation, or abuse of authority or when the victim does not or cannot consent. The term includes a broad category of sexual offenses consisting of the following specific Uniform Code of Military Justice offenses: rape, sexual assault, aggravated sexual contact, abusive sexual contact, forcible sodomy (forced oral or anal sex), or attempts to commit these acts. ⁵
Statistically Significant	A comparison is considered statistically significant if the probability of observing that difference, or a more extreme difference, is less than 5%. ⁶
Suicidal Ideation	Any self-reported thoughts of engaging in suicide. ⁴
Suicide	Self-inflicted death with evidence (either explicit or implicit) of intent to die. ⁴
Suicide Attempt	A self-inflicted, potentially injurious behavior with a nonfatal outcome for which there is evidence (either explicit or implicit) of intent to die. ⁴
Suicide Mortality Rate	The expected or observed number of suicide deaths for every 100,000 members of that specific population.

Traumatic Brain Injury	<p>A traumatically induced structural injury and/or physiological disruption of brain function as a result of an external force, indicated by new onset or worsening of at least one of these clinical signs immediately following the event:</p> <ul style="list-style-type: none"> • Any period of loss of or a decreased level of consciousness • Any loss of memory for events immediately before or after the injury <p>Any alteration in mental state at the time of the injury (confusion, disorientation, slowed thinking, etc.) or neurological deficits (weakness, loss of balance, change in vision, praxis, paresis/plegia, sensory loss, aphasia, etc.) that may or may not be due to a transient intracranial lesion used to treat disorders such as depression or bipolar disorder⁷</p>
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References and Notes

1. Quote from page 191 of Rosner, B. (2006). *Fundamentals of Biostatistics* (6th Ed.). Belmont, CA: Thomson Brooks/Cole.
2. For more information, see DoD Instruction 1332.18, “Disability Evaluation System (DES),” August 5, 2014.
3. For more information, see <https://health.mil/Military-Health-Topics/Conditions-and-Treatments/Physical-Disability/Disability-Evaluation/Medical-Evaluation>.
4. For more information, see Crosby AE, Ortega L, Melanson C. (2011). *Self-directed violence surveillance: Uniform definitions and recommended data elements, version 1.0*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.
5. For more information, see DoD Directive 6495.01, “Sexual Assault Prevention and Response (SAPR) Program,” January 23, 2012, as amended.
6. For more information, see Rosner, B. (2006). *Fundamentals of Biostatistics* (6th Ed.). Belmont, CA: Thomson Brooks/Cole.
7. For more information, see DoD Instruction 6490.13, “Comprehensive Policy on Traumatic Brain Injury-Related Neurocognitive Assessments by the Military Services,” March 31, 2017.

Appendix D: Acronyms and Initialisms

AFMES	Armed Forces Medical Examiner System
ASR	Annual Suicide Report
CDC	Centers for Disease Control and Prevention
CI	Confidence Interval
CY	Calendar Year
DHA	Defense Health Agency
DoD	Department of Defense
DoDSER	Department of Defense Suicide Event Report
DMDC	Defense Manpower Data Center
MHS	Military Health System
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OND	Operation New Dawn
POC	Point of Contact
PHCoE	Psychological Health Center of Excellence
SELRES	Selected Reserve
SMR	Standardized Mortality Ratio
SPPM	Suicide Prevention Program Manager
U.S.	United States
WISQARS	Web-based Injury Statistics Query and Reporting System

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Appendix G: Frequently Asked Questions (FAQs)

Q: Why is only aggregated data presented in this report?

A: To protect and maintain the privacy of the individuals with information in the DoDSER system, no identifiable information or singular case-level data are presented.

Q: Why do the suicide counts for a certain year sometimes change from one DoDSER Annual Report to the next?

A: When necessary, data from previous years (e.g., 2017) are updated to reflect any cases for which the cause of death determination changed after AFMES' deadline for that year.

Q: Why are suicide attempt rates not calculated for this report?

A: Suicide attempts do not necessarily result in observable injury and, as such, may go unnoticed. Attempts may also go unreported. Therefore, suicide attempt data is much more unreliable than suicide death data. Any rate calculated from unreliable data will itself be unreliable.

Q: Where can I find older DoDSER Annual Reports?

A: This report represents the DoDSER system's 11th year of operation. All 11 Annual Reports are available online via the PHCoE website: <http://www.pdhealth.mil/research-analytics/department-defense-suicide-event-report-dodser>.

Q: What is the main difference between the DoDSER Annual Report and the new DoD Annual Suicide Report (ASR)?

A: The DoDSER Annual Report was designed to be a comprehensive report about military suicide events, including deaths and attempts. As such, the DoDSER Annual Report contains military suicide counts and rates as well as data on numerous demographic variables, physical and behavioral health characteristics, contextual factors, and event-related characteristics for suicide deaths and attempts. In contrast, the ASR was designed to focus only on suicide counts and unadjusted rates among service members and their dependents so that it could be published in a short timeframe.

Q: Are DoDSER forms really submitted for each suicide event among service members, regardless of their duty status?

A: The DoDSER portal is only accessible via the .mil computer network. Individuals without access to that network cannot, at present, submit a DoDSER form for a suicide event. As such, suicide event data for service members who are not in a duty status at the time of the event may not be reported via the DoDSER system.

Q: Were there any changes to DoDSER operations in 2018?

A: Calendar year 2018 marked the first full year that suicide and suicide attempt event data was collected for service members not in a duty status. This was in accordance with Section 567 of Public Law 113-291.

Q: What steps are being taken to protect DoDSER data?

A: To conform to all data protection and privacy standards, basic data-entry users only had access to the DoDSER data that they collected and submitted themselves. Furthermore, the servers on which the DoDSER system operates are housed in a DoD Risk Management Framework-approved facility.

