

**Mortality Surveillance in the U.S. Army
2005–2011**

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**Epidemiology and Disease Surveillance Portfolio
Behavioral and Social Health Outcomes Program**

**Mortality Surveillance in the U.S. Army
2005–2011**

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Table of Contents

	<u>Page</u>
1 Summary	1
1.1 Purpose.....	1
1.2 Results.....	1
1.3 Conclusions.....	2
2 References	2
3 Authority	2
4 Background	2
5 Methods	2
5.1 Data.....	2
5.2 Rates.....	3
5.3 Caveats.....	3
6 Results	4
6.1 Mortality from All Causes.....	4
6.2 Combat Deaths.....	7
6.3 Accident Deaths.....	8
6.4 Natural Deaths.....	9
6.5 Suicides.....	10
6.6 Homicides.....	10
7 Conclusions and Recommendations	11
8 Point of Contact	14

Appendices

A	References.....	A-1
B	Detailed Tables and Figures	B-1
	Mortality from All Causes	B-2
	Causes of Combat Deaths	B-21
	Causes of Accident Deaths.....	B-22
	Causes of Natural Deaths	B-27
	Causes of Suicides	B-31
	Causes of Homicides	B-35

Table

1	Crude Mortality Rates per 100,000 Persons for Category of Death among Soldiers in the U.S. Army, 2005–2011	5
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Figures

1	Proportion of Deaths by Category among Soldiers in the U.S. Army, 2005–2011 ..	4
2	Crude Mortality Rates per 100,000 Persons for Category of Death among Soldiers in the U.S. Army, 2005–2011	6
3	Age- and Sex-Adjusted Rates of Death per 100,000 Persons for Suicides in the U.S. Army and U.S. Population, 2005–2011	7
4	Causes of Accidental Deaths among Soldiers in the U.S. Army, 2005–2011.....	8
5	Causes of Natural Deaths among Soldiers in the U.S. Army, 2005–2011	9
6	Causes of Suicides among Soldiers in the U.S. Army, 2005–2011	10
7	Causes of Homicides among Soldiers in the U.S. Army, 2005–2011.....	11

Glossary

Acronyms	Glossary-1
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**Public Health Report No. 0034370-11
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1 Summary

1.1 Purpose

Mortality surveillance can be used by military leaders and public health practitioners in the U.S. Army to focus prevention efforts, plan programs, allocate resources, develop policies, monitor trends, and suggest mitigating strategies, including actionable recommendations.

1.2 Results

From 2005 to 2011 there were 6,939 deaths in the U.S. Army. The highest crude mortality rates and proportion of deaths among all categories of death were for combat-related deaths and accidental deaths. An observed increase in combat-related deaths in 2007 was likely due to heavy sustained combat and casualties resulting from the 2007 troop surge in Iraq. As sustained combat decreased in 2008, rates and proportions of combat-related deaths decreased thereafter.

The crude mortality rate of accidental deaths decreased from 2005 compared to 2011. The proportion of accidental deaths caused by drugs or alcohol increased from 2005 (10%) to 2011 (24%) while the proportion due to motor vehicle accidents decreased from 2005 (56%) to 2011 (37%). Seventy percent of accidental deaths were transportation-related. Gunshot wounds accounted for 68% of suicides and 69% of homicides. Crude mortality rates for suicide in the U.S. Army increased from 2005 to 2011. Among Soldiers 45–64 years of age the highest crude mortality rates and proportion of deaths were attributable to natural causes, compared to Soldiers in all other age groups where the highest crude mortality rates and proportion of deaths were due to combat.

From 2005 to 2011, the mortality rates for accidental and natural deaths in the U.S. Army, adjusted for age and sex, was statistically significantly lower than the adjusted rates for the U.S. population. The adjusted mortality rate for suicide in the U.S. Army was statistically significantly lower than the rate for the U.S. population in 2005. However, the adjusted mortality rate for suicides in the U.S. Army increased from 2005 to 2011, surpassing the U.S. population rate from 2008 through 2011. However, these differences between the Army and U.S. population rates were not statistically significant. Additionally, the adjusted mortality rate for homicides for the U.S. Army was statistically significantly lower than the adjusted rate for the U.S. general population for all years from 2005 through 2011, with the exception of 2006 when the U.S. Army adjusted rate for homicide was statistically unreliable (based on less than 20 cases). An increase in the rate of death for homicides in 2009 could be attributed to two high profile incidents: the Fort Hood shooting, where 12 Soldiers and one civilian were killed, and the Camp Liberty shooting where five Soldiers were killed.

Most deaths occurred among Soldiers who were male (95%), 18–34 years of age (77%), in the Regular Army (77%), and junior enlisted (E1–E4; 49%). By comparison, a high proportion of the Soldiers in the Army are male (86%), aged 18 to 34 years of age (71%) and junior enlisted (42%). It is worth noting that young Soldiers (18–34 years of age) comprise the majority of Soldier deaths. Similarly, young men in the U.S. general population are also at higher risk of unintentional injury deaths, suicides, and homicides as compared to older persons and females.¹

1.3 Conclusions

This publication characterizes deaths from all causes among Regular Army, activated U.S. Army National Guard, and activated U.S. Army Reserve Soldiers from 2005–2011. Behavioral modification, health promotion, and other intervention strategies may mitigate the risk of death for some types of deaths. Given that 70% of accident deaths are transportation-related, predominantly from privately owned vehicles and motorcycles, continued emphasis should be placed on initiatives that address the hazards associated with motor vehicle use and transportation. Drugs and alcohol, which are responsible for a growing proportion of accidental deaths, are being addressed through numerous programs, particularly programs focused on prescription drugs. Army suicides, whose rate rose from 2005 through 2011, largely involved firearms, as did the preponderance of homicides. In response, the Army has taken measures to reduce access to firearms. Continued emphasis should be placed on reducing preventable deaths; surveillance and research can further elucidate the risk factors associated with the risk of death among Soldiers.

2 References

See Appendix A for a listing of references used within this report. The Glossary provides a list of abbreviations.

3 Authority

Army Regulation (AR) 40-5 (Preventive Medicine, 25 May 2007), Section 2-19.

4 Background

The Behavioral and Social Health Outcomes Program (BSHOP), Army Public Health Center – Provisional (APHC) analyzes, and disseminates surveillance data on mortality from all causes among Regular Army and activated U.S. Army National Guard and U.S. Army Reserve Soldiers. Mortality Surveillance in the U.S. Army is published by BSHOP and describes the characteristics of Soldier deaths and presents observed trends in mortality over time.

5 Methods

This publication includes data on U.S. Army deaths from 2005 through 2011 among active duty Regular Army and activated U.S. Army National Guard and activated U.S. Army Reserve Soldiers. Cases were included if they were between the ages of 18 and 64 at the time of death; cases under age 18 or older than 64 were excluded. Cadets were also excluded. Demographic and military characteristics are presented.

5.1 Data

Data related to mortality are stored in the Department of Defense (DOD) Medical Mortality Registry. The Mortality Surveillance Division of the Armed Forces Medical Examiner System (AFMES) maintains the Medical Mortality Registry. The manner of death determined by the civilian or AFMES coroner/medical examiner was used in this publication. Depending on jurisdiction, civilian personnel or AFMES medical examiners will conduct an investigation and issue a death certificate, autopsy report, toxicology report, and/or investigative report. Medical examiners and forensic

pathologists follow accepted standards to classify deaths into five manners (accident, natural, suicide, homicide, and undetermined) based on an assessment of all available circumstantial information and autopsy findings.² An accidental death is an unexpected and injurious event. A death due to natural causes is the result of disease, illness, or the aging process. A suicide is a death resulting from taking one's own life. A homicide is the killing of one human by another. Combat deaths that occurred in theater as the result of hostile action are classified as homicides. If the category of death cannot be determined from the evidence, then the death is classified as undetermined. Deaths that are still under investigation and no determination has been made are classified as pending. Most deaths initially classified as pending are confirmed and reclassified into another category within 12 months. The U.S. Army reports on seven categories of death that separate combat deaths from homicide. Consistent with the U.S. Army and AFMES this publication reports seven categories of death (combat, accident, natural, suicide, homicide, undetermined, and pending). The term "manner" has a specific definition so the word "category" will be used in this publication. The terms used in this publication closely match the national standard and guidelines set forth by the National Association of Medical Examiners¹ and the terms used by the U.S. Army to classify deaths. Causes of death are underlying causes of death that have been recoded from International Classification of Diseases, 10th Edition (ICD-10) codes.^{3,4}

5.2 Rates

The number and proportions of deaths (overall and for specific causes) and crude mortality rates per 100,000 persons are reported for the overall U.S. Army with stratification by sex, age, component, and rank. Direct age- and sex-adjusted mortality rates per 100,000 persons for the U.S. Army and the U.S. general population are also presented for each category of death from 2005 to 2011. U.S. age- and sex-adjusted rates are based on available mortality data and US general population data from the Centers for Disease Control and Prevention (CDC).¹ Statistical differences between age- and sex-adjusted rates for the Army and U.S. are also presented. Statistical differences between rates are determined by a formula used by the National Center for Health Statistics and are based on the number of deaths, population size, and the size of the difference between the rates.⁵ Some rate differences do not meet the statistical threshold of significance ($p < .05$). The data described in this report are current as of February 2013.

Rates are not presented for specific causes of death, undetermined and pending categories, and categories with a small number of cases (less than 20 cases), because rates based on few cases (less than 20 cases) produce unstable and statistically unreliable estimates.^{5,6} In addition, mortality data are not subject to sampling error because it is expected that all deaths in the population are captured.⁷ However, mortality data, even those based on complete counts, are subject to random variation. An individual's chance of death and the death rate for the population may vary from one time to another, even while the underlying overall risk of death for individuals in the population may not change. The random variation is taken into account with the standard error in statistical comparisons of the adjusted rates and in 95% confidence intervals; however, 95% confidence intervals are not presented for crude or adjusted rates.

5.3 Caveats

Several important caveats must be considered when interpreting mortality surveillance data. First, surveillance data typically improve as data collection becomes refined over time. This may result in frequencies and proportions appearing to increase in later years, although these increases may be the result of improved data capture. Second, misclassification of mortality cases by medical examiners evaluating and reporting the manners and causes of death is possible, but the extent to which this occurs is unknown. Third, crude and adjusted mortality rates are used for different

purposes, and each has strengths and limitations. Crude mortality rates are easily interpretable and provide general information regarding mortality, but they do not account for demographic differences in the population which may affect the rate of death. Since the U.S. Army population is generally younger and has a higher prevalence of males in comparison to the U.S. general population,⁸ adjusted rates, using the direct adjustment method, are generally preferable to make appropriate comparisons because they control for the effects of age and sex differences in the populations.

In addition, various Department of Defense organizations, such as AFMES, in collaboration with BSHOP and the Defense Center for Telehealth and Technology (T2), routinely report on characteristics and trends related to suicide deaths in the Army. Each organization uses different methodology which can result in minor differences in reported data. AFMES and T2 report in the Department of Defense Suicide Event Report Calendar Year 2011 Annual Report⁹ that the U.S. Army suicide rate for active duty and activated Guard and Reserve Soldiers was 22.9 deaths per 100,000 persons in 2011. BSHOP reported the 2011 suicide rate to be 24.4 deaths per 100,000 persons (95% confidence interval: 20.7 to 28.1).¹⁰ This publication reports the 2011 suicide rate to be 23.8 deaths per 100,000 persons (95% confidence interval: 20.2 to 27.4). These differences result from differences in when the suicide count is obtained and in how the denominators are calculated (AFMES/T2 uses the end strength in September whereas BSHOP uses the average monthly end strength). Furthermore, this mortality report, in order to improve comparisons to the U.S. general population, limits the population to Soldiers aged 18 to 64 years, non-Cadets, and those without a missing category of death.

6 Results

6.1 Mortality from All Causes

From 2005 to 2011, combat-related death (42%) was the most common category of death followed by accidental death (26%), death due to natural causes (14%), suicide (13%), and homicide (3%) (Figure 1).

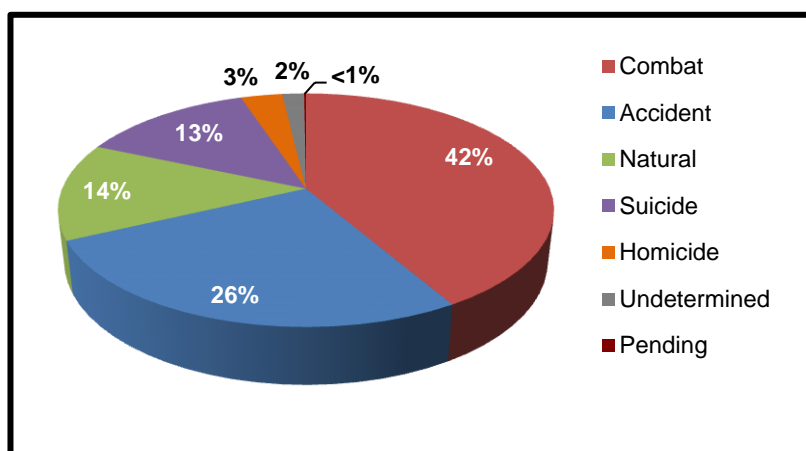


Figure 1. Proportion of Deaths by Category among Soldiers in the U.S. Army, 2005–2011

Table B-2 (page B-3) presents overall numbers and proportions for each category of death, by year.

6.1.1 Demographic and Military Characteristics

From 2005 to 2011, 6,939 deaths occurred among U.S. Army Soldiers. The majority of deaths were among male Soldiers (95%) 18-34 years of age (77%). Most Soldiers were in the Regular Army (77%), and almost half were in the ranks of E1–E4 (49%).

Table B-1 (page B-2) depicts numbers and proportions of demographic and military characteristics by category of death, and Tables B-3–B-6 (pages B-4–B-9) present numbers and proportions for category of death by sex, age group, component, and rank, respectively.

6.1.2 Crude Mortality Rates

The crude mortality rate for the combined period of 2005 to 2011 was 146.5 deaths per 100,000. The crude mortality rate decreased from 2007 (201.3 deaths per 100,000) compared to 2011 (125.1 deaths per 100,000). Crude mortality rates for the combined years (2005 to 2011) stratified by demographic and military characteristics are presented below:

- Sex: The U.S. Army mortality rate was 161.6 per 100,000 for males and 55.0 per 100,000 for females.
- Age Group: The U.S. Army mortality rates stratified by age group were: 18–24 years, 181.0 per 100,000; 25–34 years, 136.4 per 100,000; 35–44 years, 104.2 per 100,000; and 45–64 years, 168.2 per 100,000.
- Component: The U.S. Army mortality rates stratified by component were: Regular Army, 145.2 per 100,000; Army National Guard, 174.0 per 100,000; and Army Reserve, 116.4 per 100,000.
- Rank: The U.S. Army mortality rates stratified by rank were: E1–E4, 172.2 per 100,000; E5–E9, 141.9 per 100,000; W1–W5, 123.9 per 100,000; O1–O3, 95.0 per 100,000; and O4–O7, 81.9 per 100,000.

Table 1. Crude Mortality Rates per 100,000 Persons for Category of Death among Soldiers in the U.S. Army, 2005–2011^a

Category of Death	Rate
Combat	60.9
Accident	38.7
Natural	19.8
Suicide	19.7
Homicide	4.8
Total	146.5

Notes: ^aCrude rates for undetermined (N = 118) and pending (N = 10) deaths are not presented due to low numbers per year; e.g., calculations with less than 20 deaths per year are considered to be unstable. Total rate includes undetermined and pending deaths.

From 2005 to 2011 the highest mortality rates were combat-related deaths followed by accidental deaths (Table 1). Among combat-related deaths, the rate was highest in 2007 (112.4 deaths per 100,000) and decreased in subsequent years (Figure 2). Among accidental deaths, the mortality rate decreased from 45.9 deaths per 100,000 in 2005 to 33.8 deaths per 100,000 in 2011. The mortality rate for natural causes remained steady during that time period. The homicide rate also remained stable during this period, with the exception of a slight peak in 2009.

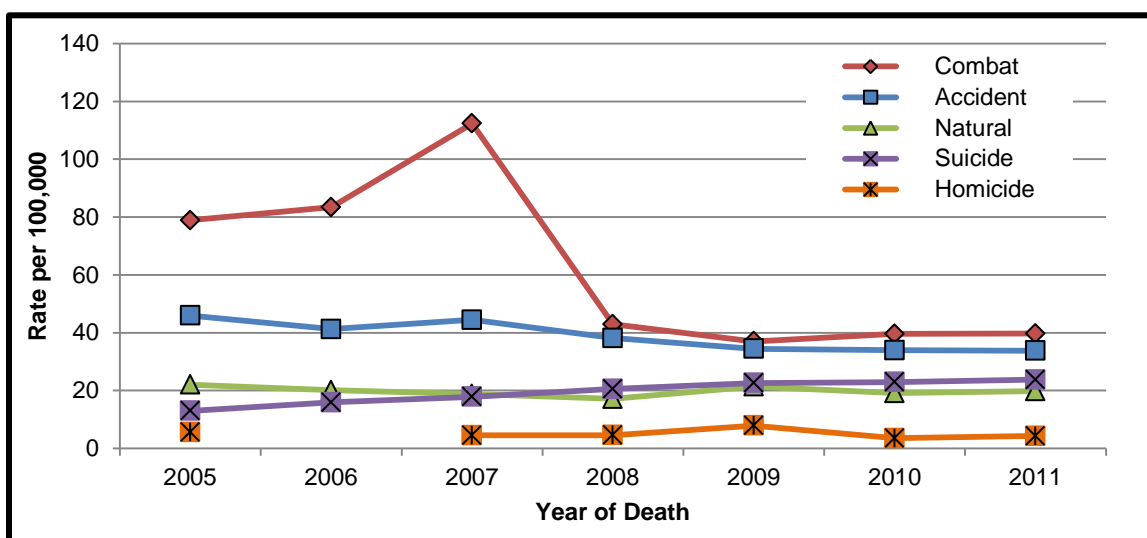


Figure 2. Crude Mortality Rates per 100,000 Persons for Category of Death among Soldiers in the U.S. Army, 2005–2011

Note: The U.S. Army crude rate for homicide in 2006 is not presented here because it was based on < 20 deaths.

The rate of suicide deaths increased from 13.0 per 100,000 in 2005 to 23.8 per 100,000 in 2011. Suicide represented the fourth highest rate of death from 2005 to 2007 and the third highest rate from 2008 to 2011.

Among Soldiers 45–64 years of age the highest crude mortality rates were attributable to natural causes, as compared to Soldiers in all other age groups where the highest crude mortality rates were due to combat. Crude mortality rates (by category, sex, age group, component, and rank) are in Tables B-7–B-11 (pages B-10–B-16).

6.1.3 Age- and Sex-Adjusted Mortality Rates

Age- and sex-adjusted mortality rates per 100,000 persons are described below for each category of death from 2005–2011 using available mortality data from the U.S. general population. Age- and sex-adjusted rates control for the effects of age and sex differences between populations (e.g., because the U.S. Army population tends to be on average younger and have more males than the general U.S. population). The adjusted rate for the U.S. Army and the U.S. general population were statistically compared for each calendar year.

Each year from 2005 to 2011, the U.S. Army had a statistically significantly lower adjusted rate of death due to natural causes and accidental deaths compared to the U.S. population. The adjusted rate of death for homicides (Figure B-3, page B-19) for the U.S. Army was statistically significantly lower than the adjusted rates for the U.S. general population for all years from 2005 through 2011, with the exception of 2006 when the U.S. Army adjusted rate for homicide was unstable.

The adjusted mortality rate for suicides in the U.S. Army was statistically significantly lower than the rate for the U.S. population in 2005. The adjusted mortality rate for suicides in the U.S. Army was not statistically significantly different compared to the U.S. population for any years from 2006 to 2011. However, the adjusted mortality rate for suicides in the U.S. Army increased from 2005 to 2011 (Figure 3), surpassing the U.S. population rate from 2008 through 2011. In 2011 the adjusted mortality rate for suicides for the U.S. Army was 23.8 per 100,000 persons compared to 20.6 per 100,000 in the U.S. population.

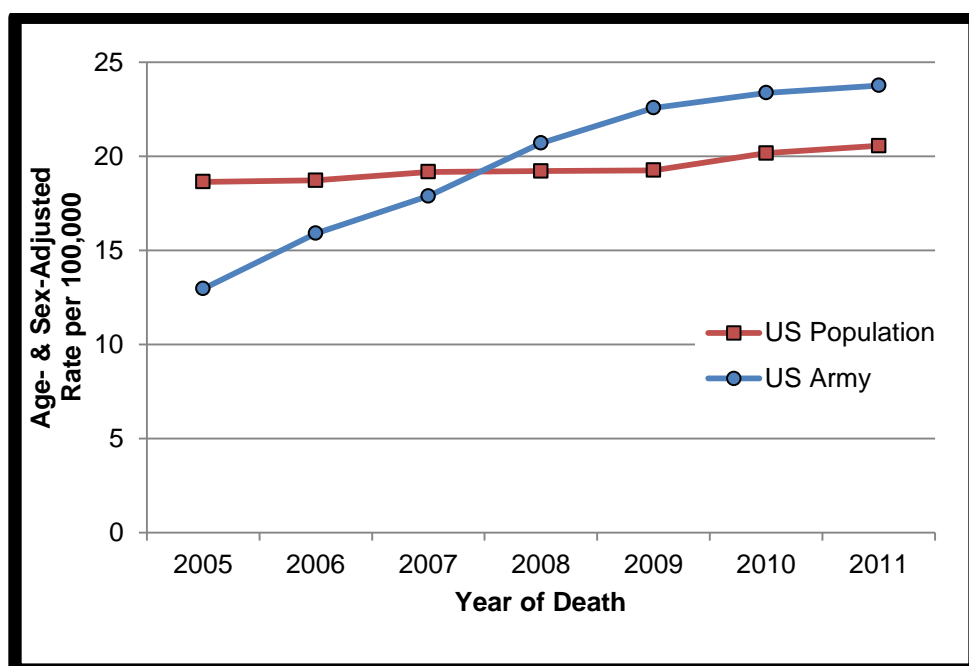


Figure 3. Age- and Sex-Adjusted Rates of Death per 100,000 Persons for Suicides in the U.S. Army and U.S. Population, 2005–2011

Notes: Age- and sex-adjusted mortality rates per 100,000 persons are presented using the direct adjustment method. U.S. rates were calculated using available data from the CDC. The 2004 Army population was used as a standard comparison population for both the U.S. Army and the U.S. population.

Table B-12 (page B-20) and Figures B-1–B-3 (pages B-17–B-19) depict age- and sex-adjusted mortality rates for categories of death for the U.S. Army and U.S. general population by year. Salient characteristics for each category of death from 2005 to 2011 are described below. Rates were not calculated for the specific causes of death because the small number of cases (less than 20) produce unstable and statistically unreliable rates.⁶

6.2 Combat Deaths

Public Health Report No. S.0034370-11

- 2,886 deaths were combat-related
- 98% male
- 87% 18–34 years of age
- 83% Regular Army

Table B-13 (page B-21) describes the causes of combat deaths.

6.3 Accidental Deaths

1,832 deaths were the result of accidents

- 95% male
- 80% 18–34 years of age
- 76% Regular Army
- 70% transportation-related (Figure 4)
- Proportion of accidental deaths caused by drug or alcohol overdoses increased from 2005 (10%) compared to 2011 (24%)
- Proportion of accidental deaths caused by motor vehicle accidents decreased from 2005 (56%) compared to 2011 (37%)

The causes of accidental deaths are described in Figure 4 and in Tables B-14–B-17 (pages B-22–B-26).

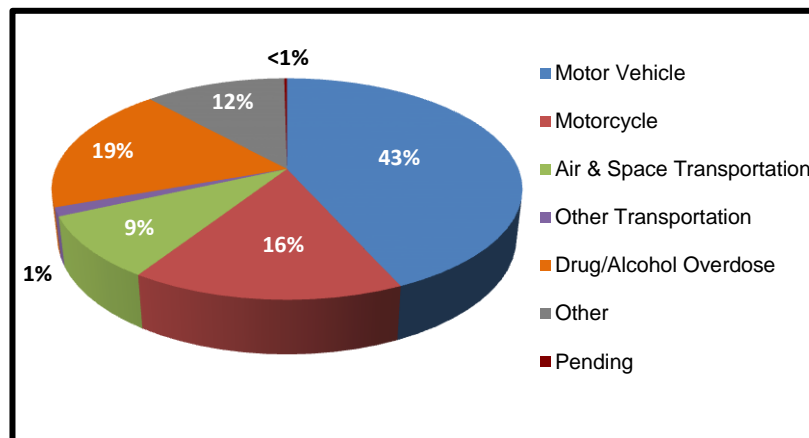


Figure 4. Causes of Accidental Deaths among Soldiers in the U.S. Army, 2005–2011

Notes: Other transportation includes rail, water transport, and all other transportation. Drug/alcohol overdose includes poisonings from other solids and liquids, including medications. Other includes falls, drownings, poisonings from gases/vapors, and all other accidental deaths.

6.4 Natural Deaths

- 937 deaths were due to natural causes
- 87% male
- 68% 35–64 years of age
- 54% Regular Army
- 44% caused by neoplasms (cancer)
- 40% caused by diseases of the circulatory system (such as heart attack and stroke)
- Proportion of natural deaths caused by neoplasms was higher for females (61%) than males (41%)
- Proportion of natural deaths caused by diseases of the circulatory system was higher for males (43%) than females (17%)

The causes of natural deaths are described in Figure 5 and in Tables B-18–B-21 (pages B-27–B-30).

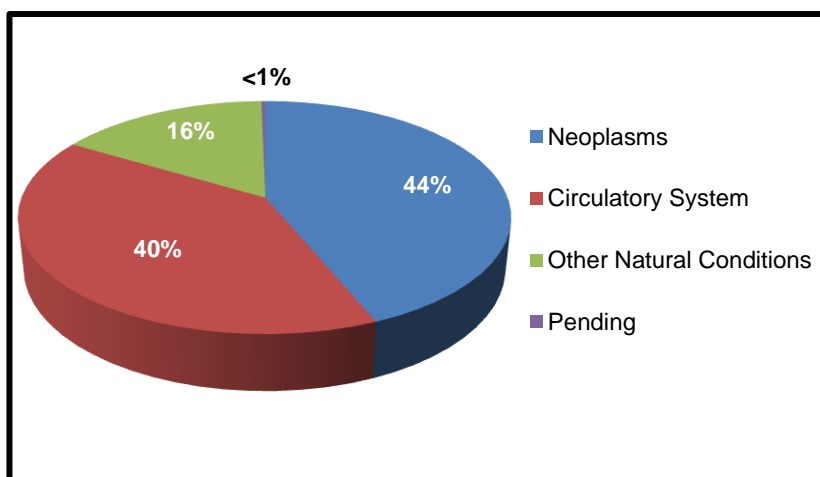


Figure 5. Causes of Natural Deaths among Soldiers in the U.S. Army, 2005–2011

Note: Other natural conditions includes diseases related to: the nervous system, the respiratory system, the digestive system, the musculoskeletal system, mental and behavioral disorders, congenital malformations, blood, endocrine, skin, pregnancy, infections, and all other natural conditions.

6.5 Suicides

- 931 deaths were suicides
- 94% male
- 80% 18–34 years of age
- 84% Regular Army
- 68% caused by gunshot wounds
- 20% caused by hangings
- 6% caused by drug/alcohol overdose

The causes of suicides are described in Figure 6 and in Tables B-22–B-25 (pages B-31–B-34).

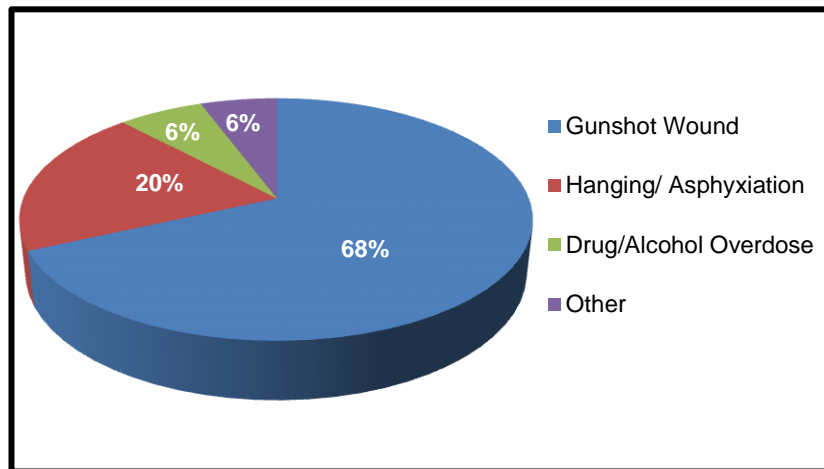


Figure 6. Causes of Suicides among Soldiers in the U.S. Army, 2005–2011

Notes: Drug/alcohol overdose includes poisonings from other solids and liquids, including medications. Other includes carbon monoxide and other gas/vapor poisonings, jumping from a high place, and all other means.

6.6 Homicides

- 225 deaths were homicides
- 85% male
- 84% 18–34 years of age
- 80% Regular Army

Public Health Report No. S.0034370-11

- 69% caused by gunshot wounds
- 14% caused by sharp objects
- The proportion of homicides due to gunshot wounds increased from 2005 (57%) compared to 2011 (77%)

The causes of homicides are described in Figure 7 and in Tables B-26–B-29 (pages B-35–B-38).

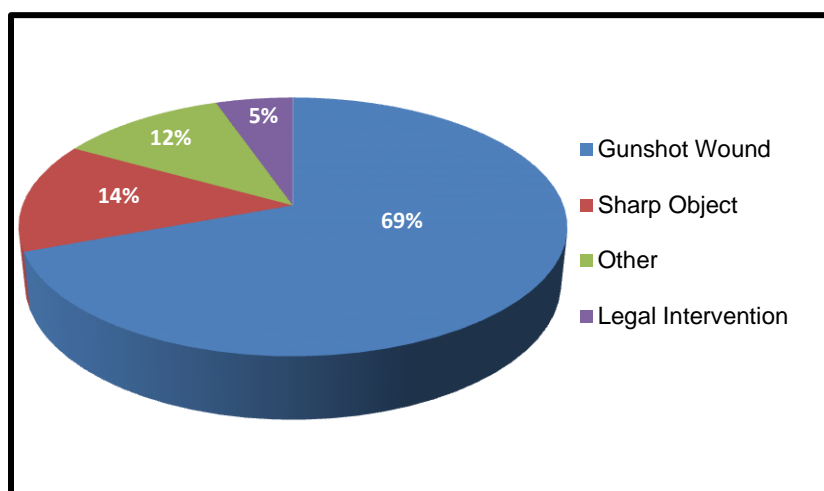


Figure 7. Causes of Homicides among Soldiers in the U.S. Army, 2005–2011

Notes: Other includes strangulation, blunt object, bodily force, and all other means. Legal intervention includes legal execution and deaths by police or other law-enforcing agents.

7 Conclusions and Recommendations

While combat-related deaths are a consequence of military service, other types of death are considered preventable outcomes for which behavior modification could potentially mitigate the risk of death.¹¹ From 2005 to 2011, 70% of accidental deaths were transportation-related (e.g., privately owned vehicle (POV), privately owned motorcycle (POM), or other transportation). Several important preventive measures such as Composite Risk Management, the Travel Risk Planning System (TRiPS), the Motorcycle Mentorship Program (MMP), the POV/POM Toolbox, and privately owned vehicle inspections are routinely conducted at the installation level, while several other programs are conducted through the U.S. Army Combat Readiness/Safety Center.¹² However, there is no standardization of these processes across the force. While the proportion of accidental deaths caused by motor vehicle accidents decreased from 2005 (56%) compared to 2011 (37%), continued emphasis should be placed on Army-wide initiatives that address the risks and hazards associated with motor vehicle use and transportation.

Nineteen percent of all accidental deaths were caused by drugs or alcohol. Moreover, the proportion of accidental deaths caused by drugs or alcohol increased from 2005 (10%) to 2011 (24%). The Army is aware of the escalating problems associated with alcohol and drug abuse (to

Public Health Report No. S.0034370-11

include prescription medications) among Soldiers.¹³ The Army Substance Abuse Program (ASAP) has piloted the Confidential Alcohol Treatment and Education Program (CATEP), which allows Soldiers to voluntarily request help and enroll in ASAP without their chain of command being involved.¹⁴ This confidential process may help alleviate some of the stigma and barriers to seeking help. The Army has also instituted the Sole Provider Program (SPP) which allows any Primary Care Manager (PCM) who feels a Soldier is abusing medication to designate him/herself as the only provider who can prescribe controlled substances to the Soldier.¹⁵ The SPP makes it difficult for Soldiers who might be at risk for addiction to utilize more than one physician to procure addictive medications. The APHC, in collaboration with the Office of the Surgeon General (OTSG), has developed a comprehensive training program called the Polypharmacy and Overdose Medical Education (POME) to train providers and Soldiers on the dangers of misuse and abuse of prescription medications.¹⁶ In addition, the Army has partnered with the Drug Enforcement Agency to conduct the National Prescription Drug Take-Back Day, a venue for disposal of unused, unwanted, and expired medications.^{17,18}

The adjusted mortality rate for suicides in the U.S. Army increased from 2005 to 2010, surpassing the U.S. population rate from 2008 through 2010. In response, the Army has developed training programs and created multidisciplinary working groups and surveillance initiatives to educate and inform Soldiers about suicide. For example, the Department of the Army funded the Army Study to Assess Risk and Resilience in Service Members (Army STARRS), the largest study of mental health risk and resilience ever conducted among military personnel.¹⁹ Given current trends, continued surveillance and research is needed to further elucidate the risk factors that are associated with an increased risk of suicide among Soldiers. Also, between 2008 and 2009, the Ask, Care, Escort (ACE) Training was developed by APHC. ACE, which focuses on Soldiers, Leaders, Department of the Army Civilians and Families, is the Army-approved suicide prevention and awareness training model designed to help individuals recognize risk factors and warning signs of suicidal behavior.²⁰ ACE training (according to Army Regulation (AR) 600-63) is conducted annually. In addition, the Applied Suicide Intervention Skills Training (ASIST) teaches gatekeepers and caregivers “to recognize individuals who are at risk and how to intervene to prevent the risk of suicidal thoughts becoming suicidal behaviors.”²⁰

Almost 70% of homicides and almost 70% of suicides among Soldiers were due to gunshot wounds. In addition, the proportion of homicides due to gunshot wounds increased from 2005 compared to 2011. The Army has taken action to reduce deaths caused by firearms. There are Army regulations on registering firearms and securing weapons on military installations. Also, the Veterans Administration published clinical practice guidelines which recommend limiting access to lethal means, including firearms, drugs, and poisons, for patients at high risk of suicide.²¹

Among Soldiers 45-64 years of age, the highest crude mortality rates were attributable to natural causes; in all other age groups, the highest crude mortality rates were due to combat. In response, the Army has developed several initiatives to encourage and promote healthy lifestyles. One initiative of the Army Medicine 2020 Campaign Plan (AMEDD 2020) is to move from a healthcare system to a System For Health to impact the determinants of health, lifestyle choices and social and environmental factors that contribute to the overall health.²² Another is the Performance Triad—improving the quality of activity, nutrition, and sleep—to strengthen readiness, performance, and overall health. AMEDD 2020 is synchronized with the Army’s Ready and Resilient Campaign Plan (R2). The R2 coordinates installation-wide assets and garrison prevention programs and services, including the Army Suicide Prevention Program, to build the physical, emotional and psychological resilience among Soldiers, Families and Civilians.²³ Resilience Training offers “strength-based, positive psychology tools to aid Soldiers, Leaders and Families in their ability to grow and thrive in the face of challenges and bounce back from adversity.” Resilience Training

Public Health Report No. S.0034370-11

utilizes the peer-to-peer model in which fellow Soldiers describe similar experiences, become the facilitators, messengers and advocates for the effectiveness of resiliency.

8 Point of Contact

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Appendix A

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Appendix B
Detailed Tables and Figures

Mortality from All Causes

Table B-1. Demographic and Military Characteristics of Deaths in the U.S. Army, 2005–2011

Characteristics - N (%)	Category of Death (N = 6939) ^a							Total (N = 6939)
	Combat (N = 2886)	Accident (N = 1832)	Natural (N = 937)	Suicide (N = 931)	Homicide (N = 225)	Undetermined (N = 118)	Pending (N = 10)	
Sex								
Male	2842 (98)	1735 (95)	814 (87)	878 (94)	191 (85)	103 (87)	9 (90)	6572 (95)
Female	44 (2)	97 (5)	123 (13)	53 (6)	34 (15)	15 (13)	1 (10)	367 (5)
Age Group (yr)								
18–24	1387 (48)	851 (46)	108 (12)	399 (43)	116 (52)	51 (43)	1 (10)	2913 (42)
25–34	1122 (39)	631 (34)	195 (21)	340 (37)	72 (32)	38 (32)	6 (60)	2404 (35)
35–44	323 (11)	259 (14)	301 (32)	164 (18)	26 (12)	19 (16)	2 (20)	1094 (16)
45–64	54 (2)	91 (5)	333 (36)	28 (3)	11 (5)	10 (8)	1 (10)	528 (8)
Component								
Regular Army	2390 (83)	1393 (76)	506 (54)	781 (84)	181 (80)	91 (77)	9 (90)	5351 (77)
National Guard	382 (13)	306 (17)	265 (28)	104 (11)	27 (12)	20 (17)	1 (10)	1105 (16)
Army Reserve	114 (4)	133 (7)	166 (18)	46 (5)	17 (8)	7 (6)	0 (0)	483 (7)
Rank								
E1–E4	1487 (52)	1017 (56)	175 (19)	522 (56)	137 (61)	71 (60)	6 (60)	3415 (49)
E5–E9	1131 (39)	636 (35)	555 (59)	330 (35)	69 (31)	38 (32)	4 (40)	2763 (40)
W1–W5	36 (1)	73 (4)	33 (4)	10 (1)	1 (<1)	3 (3)	0 (0)	156 (2)
O1–O3	187 (6)	66 (4)	45 (5)	45 (5)	14 (6)	3 (3)	0 (0)	360 (5)
O4–O7	45 (2)	40 (2)	129 (14)	24 (3)	4 (2)	3 (3)	0 (0)	245 (4)

Notes: ^aIncludes active duty Regular Army, activated National Guard, and activated Army Reserve Soldiers. 22 cases were excluded because they were aged <18 or >64 (N=7) or were Cadets (N=15).

Table B-2. Number of Deaths in the U.S. Army, Overall, 2005–2011^a

Category - N (%)	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Combat	522 (47)	530 (50)	723 (56)	290 (34)	263 (29)	281 (33)	277 (32)	2886 (42)
Accident	304 (27)	262 (25)	286 (22)	258 (30)	245 (27)	241 (28)	236 (27)	1832 (26)
Natural	146 (13)	128 (12)	121 (9)	116 (14)	152 (17)	136 (16)	138 (16)	937 (14)
Suicide	86 (8)	101 (10)	115 (9)	139 (16)	161 (18)	163 (19)	166 (19)	931 (13)
Homicide	37 (3)	17 (2)	29 (2)	31 (4)	56 (6)	25 (3)	30 (3)	225 (3)
Undetermined	16 (1)	13 (1)	21 (2)	17 (2)	22 (2)	13 (2)	16 (2)	118 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	10 (1)	10 (<1)

Notes: ^aIncludes active duty Regular Army, activated National Guard, and activated Army Reserve Soldiers. 22 cases were excluded because they were aged <18 or >64 (N=7) or were Cadets (N=15).

Table B-3. Number of Deaths in the U.S. Army, by Sex, 2005–2011^a

Sex - N (%)	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Male								
Combat	512 (48)	524 (52)	710 (57)	289 (36)	260 (31)	277 (34)	270 (33)	2842 (43)
Accident	289 (27)	248 (25)	270 (22)	241 (30)	233 (27)	230 (28)	224 (28)	1735 (26)
Natural	134 (13)	116 (12)	110 (9)	92 (12)	130 (15)	115 (14)	117 (14)	814 (12)
Suicide	82 (8)	91 (9)	109 (9)	131 (17)	156 (18)	154 (19)	155 (19)	878 (13)
Homicide	31 (3)	13 (1)	26 (2)	25 (3)	49 (6)	23 (3)	24 (3)	191 (3)
Undetermined	15 (1)	10 (1)	18 (1)	15 (2)	20 (2)	11 (1)	14 (2)	103 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (1)	9 (<1)
Total	1063 (100)	1002 (100)	1243 (100)	793 (100)	848 (100)	810 (100)	813 (100)	6572 (100)
Female								
Combat	10 (21)	6 (12)	13 (25)	1 (2)	3 (6)	4 (8)	7 (12)	44 (12)
Accident	15 (31)	14 (29)	16 (31)	17 (29)	12 (24)	11 (22)	12 (20)	97 (26)
Natural	12 (25)	12 (24)	11 (21)	24 (41)	22 (43)	21 (43)	21 (35)	123 (34)
Suicide	4 (8)	10 (20)	6 (12)	8 (14)	5 (10)	9 (18)	11 (18)	53 (14)
Homicide	6 (13)	4 (8)	3 (6)	6 (10)	7 (14)	2 (4)	6 (10)	34 (9)
Undetermined	1 (2)	3 (6)	3 (6)	2 (3)	2 (4)	2 (4)	2 (3)	15 (4)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	1 (<1)
Total	48 (100)	49 (100)	52 (100)	58 (100)	51 (100)	49 (100)	60 (100)	367 (100)

Notes: ^aIncludes active duty Regular Army, activated National Guard, and activated Army Reserve Soldiers. 22 cases were excluded because they were aged <18 or >64 (N=7) or were Cadets (N=15).

Table B-4. Number of Deaths in the U.S. Army, by Age Group, 2005–2011^a

Age Group - N (%)	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Age 18–24								
Combat	228 (52)	255 (56)	384 (61)	131 (36)	117 (32)	148 (42)	124 (41)	1387 (48)
Accident	145 (33)	124 (27)	141 (22)	131 (36)	122 (33)	99 (28)	89 (29)	851 (29)
Natural	11 (3)	15 (3)	21 (3)	18 (5)	18 (5)	9 (3)	16 (5)	108 (4)
Suicide	35 (8)	49 (11)	50 (8)	63 (17)	68 (19)	78 (22)	56 (19)	399 (14)
Homicide	17 (4)	9 (2)	22 (3)	18 (5)	31 (8)	10 (3)	9 (3)	116 (4)
Undetermined	2 (<1)	7 (2)	12 (2)	7 (2)	11 (3)	5 (1)	7 (2)	51 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (<1)	1 (<1)
Total	438 (100)	459 (100)	630 (100)	368 (100)	367 (100)	349 (100)	302 (100)	2913 (100)
Age 25–34								
Combat	208 (54)	200 (59)	261 (62)	114 (41)	110 (34)	108 (36)	121 (34)	1122 (47)
Accident	99 (26)	84 (25)	96 (23)	84 (30)	87 (27)	78 (26)	103 (29)	631 (26)
Natural	25 (6)	22 (6)	16 (4)	25 (9)	42 (13)	36 (12)	29 (8)	195 (8)
Suicide	34 (9)	26 (8)	37 (9)	37 (13)	68 (21)	63 (21)	75 (21)	340 (14)
Homicide	15 (4)	4 (1)	5 (1)	13 (5)	14 (4)	9 (3)	12 (3)	72 (3)
Undetermined	4 (1)	4 (1)	6 (1)	3 (1)	7 (2)	6 (2)	8 (2)	38 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (2)	6 (<1)
Total	385 (100)	340 (100)	421 (100)	276 (100)	328 (100)	300 (100)	354 (100)	2404 (100)

Table B-4. Number of Deaths in the U.S. Army, by Age Group, 2005–2011^a (Continued)

Age Group - N (%)	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Age 35–44								
Combat	75 (37)	58 (38)	68 (40)	41 (28)	32 (24)	21 (15)	28 (19)	323 (30)
Accident	47 (23)	32 (21)	40 (23)	35 (24)	27 (20)	49 (35)	29 (20)	259 (24)
Natural	56 (27)	39 (25)	40 (23)	33 (23)	45 (34)	44 (31)	44 (30)	301 (28)
Suicide	15 (7)	18 (12)	22 (13)	31 (21)	23 (17)	21 (15)	34 (23)	164 (15)
Homicide	4 (2)	4 (3)	2 (1)	0 (0)	4 (3)	5 (4)	7 (5)	26 (2)
Undetermined	7 (3)	2 (1)	0 (0)	5 (3)	3 (2)	1 (1)	1 (1)	19 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (1)	2 (<1)
Total	204 (100)	153 (100)	172 (100)	145 (100)	134 (100)	141 (100)	145 (100)	1094 (100)
Age 45–64								
Combat	11 (13)	17 (17)	10 (14)	4 (6)	4 (6)	4 (6)	4 (6)	54 (10)
Accident	13 (15)	22 (22)	9 (13)	8 (13)	9 (13)	15 (22)	15 (21)	91 (17)
Natural	54 (64)	52 (53)	44 (61)	40 (65)	47 (67)	47 (68)	49 (68)	333 (63)
Suicide	2 (2)	8 (8)	6 (8)	8 (13)	2 (3)	1 (1)	1 (1)	28 (5)
Homicide	1 (1)	0 (0)	0 (0)	0 (0)	7 (10)	1 (1)	2 (3)	11 (2)
Undetermined	3 (4)	0 (0)	3 (4)	2 (3)	1 (1)	1 (1)	0 (0)	10 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	1 (<1)
Total	84 (100)	99 (100)	72 (100)	62 (100)	70 (100)	69 (100)	72 (100)	528 (100)

Notes: ^aIncludes active duty Regular Army, activated National Guard, and activated Army Reserve Soldiers. 22 cases were excluded because they were aged <18 or >64 (N=7) or were Cadets (N=15).

Table B-5. Number of Deaths in the U.S. Army, by Component, 2005–2011^a

Component - N (%)	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Regular Army								
Combat	324 (48)	453 (54)	660 (61)	243 (36)	207 (30)	264 (38)	239 (34)	2390 (45)
Accident	199 (29)	204 (24)	224 (21)	214 (32)	185 (27)	180 (26)	187 (27)	1393 (26)
Natural	58 (9)	66 (8)	70 (6)	56 (8)	89 (13)	77 (11)	90 (13)	506 (9)
Suicide	60 (9)	86 (10)	93 (9)	114 (17)	144 (21)	143 (21)	141 (20)	781 (15)
Homicide	26 (4)	14 (2)	25 (2)	29 (4)	44 (6)	20 (3)	23 (3)	181 (3)
Undetermined	12 (2)	10 (1)	13 (1)	12 (2)	18 (3)	13 (2)	13 (2)	91 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (1)	9 (<1)
Total	679 (100)	833 (100)	1085 (100)	668 (100)	687 (100)	697 (100)	702 (100)	5351 (100)
National Guard								
Combat	150 (51)	59 (39)	43 (30)	38 (29)	45 (31)	16 (15)	31 (23)	382 (35)
Accident	62 (21)	42 (28)	46 (32)	36 (27)	38 (26)	41 (39)	41 (30)	306 (28)
Natural	51 (17)	41 (27)	26 (18)	37 (28)	41 (28)	34 (32)	35 (26)	265 (24)
Suicide	18 (6)	5 (3)	19 (13)	17 (13)	15 (10)	13 (12)	17 (13)	104 (9)
Homicide	8 (3)	3 (2)	3 (2)	1 (1)	3 (2)	2 (2)	7 (5)	27 (2)
Undetermined	3 (1)	2 (1)	6 (4)	3 (2)	3 (2)	0 (0)	3 (2)	20 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	1 (<1)
Total	292 (100)	152 (100)	143 (100)	132 (100)	145 (100)	106 (100)	135 (100)	1105 (100)
Army Reserve								
Combat	48 (34)	18 (27)	20 (30)	9 (18)	11 (16)	1 (2)	7 (19)	114 (24)
Accident	43 (31)	16 (24)	16 (24)	8 (16)	22 (33)	20 (36)	8 (22)	133 (28)
Natural	37 (26)	21 (32)	25 (37)	23 (45)	22 (33)	25 (45)	13 (36)	166 (34)
Suicide	8 (6)	10 (15)	3 (4)	8 (16)	2 (3)	7 (13)	8 (22)	46 (10)
Homicide	3 (2)	0 (0)	1 (1)	1 (2)	9 (13)	3 (5)	0 (0)	17 (4)
Undetermined	1 (1)	1 (2)	2 (3)	2 (4)	1 (1)	0 (0)	0 (0)	7 (1)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	140 (100)	66 (100)	67 (100)	51 (100)	67 (100)	56 (100)	36 (100)	483 (100)

Notes: ^aIncludes active duty Regular Army, activated National Guard, and activated Army Reserve Soldiers. 22 cases were excluded because they were aged <18 or >64 (N=7) or were Cadets (N=15).

Table B-6. Number of Deaths in the U.S. Army, by Rank, 2005–2011^a

Rank - N (%)	Year of Death (N = 6939)							
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	2005–2011 (N = 6939)
E1–E4								
Combat	243 (49)	271 (53)	400 (59)	140 (33)	121 (27)	157 (37)	155 (36)	1487 (44)
Accident	158 (32)	138 (27)	160 (23)	147 (35)	151 (34)	129 (30)	134 (31)	1017 (30)
Natural	17 (3)	17 (3)	27 (4)	32 (8)	31 (7)	25 (6)	26 (6)	175 (5)
Suicide	50 (10)	62 (12)	59 (9)	78 (18)	93 (21)	95 (22)	85 (20)	522 (15)
Homicide	21 (4)	11 (2)	21 (3)	16 (4)	36 (8)	16 (4)	16 (4)	137 (4)
Undetermined	6 (1)	11 (2)	15 (2)	9 (2)	13 (3)	7 (2)	10 (2)	71 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (1)	6 (0)
Total	495 (100)	510 (100)	682 (100)	422 (100)	445 (100)	429 (100)	432 (100)	3415 (100)
E5–E9								
Combat	230 (48)	208 (50)	266 (54)	116 (34)	113 (33)	102 (30)	96 (28)	1131 (41)
Accident	112 (23)	88 (21)	100 (20)	98 (28)	72 (21)	90 (26)	76 (22)	636 (23)
Natural	92 (19)	84 (20)	69 (14)	64 (19)	90 (26)	78 (23)	78 (23)	555 (20)
Suicide	29 (6)	29 (7)	44 (9)	46 (13)	51 (15)	62 (18)	69 (20)	330 (12)
Homicide	12 (2)	4 (1)	7 (1)	13 (4)	14 (4)	7 (2)	12 (4)	69 (2)
Undetermined	8 (2)	0 (0)	6 (1)	8 (2)	6 (2)	5 (1)	5 (1)	38 (1)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (1)	4 (<1)
Total	483 (100)	413 (100)	492 (100)	345 (100)	346 (100)	344 (100)	340 (100)	2763 (100)
W1–W5								
Combat	9 (32)	7 (23)	7 (30)	2 (17)	7 (28)	0 (0)	4 (17)	36 (23)
Accident	9 (32)	16 (53)	12 (52)	5 (42)	9 (36)	9 (60)	13 (57)	73 (47)
Natural	8 (29)	2 (7)	3 (13)	3 (25)	6 (24)	6 (40)	5 (22)	33 (21)
Suicide	2 (7)	3 (10)	1 (4)	2 (17)	2 (8)	0 (0)	0 (0)	10 (6)
Homicide	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Undetermined	0 (0)	1 (3)	0 (0)	0 (0)	1 (4)	0 (0)	1 (4)	3 (2)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	28 (100)	30 (100)	23 (100)	12 (100)	25 (100)	15 (100)	23 (100)	156 (100)

Table B-6. Number of Deaths in the U.S. Army, by Rank, 2005–2011^a (Continued)

Rank - N (%)	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
O1–O3								
Combat	35 (52)	35 (58)	40 (68)	21 (55)	17 (39)	18 (44)	21 (41)	187 (52)
Accident	17 (25)	12 (20)	10 (17)	6 (16)	9 (20)	7 (17)	5 (10)	66 (18)
Natural	7 (10)	7 (12)	1 (2)	3 (8)	4 (9)	10 (24)	13 (25)	45 (13)
Suicide	4 (6)	4 (7)	7 (12)	6 (16)	10 (23)	3 (7)	11 (22)	45 (13)
Homicide	4 (6)	1 (2)	1 (2)	2 (5)	3 (7)	2 (5)	1 (2)	14 (4)
Undetermined	0 (0)	1 (2)	0 (0)	0 (0)	1 (2)	1 (2)	0 (0)	3 (1)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	67 (100)	60 (100)	59 (100)	38 (100)	44 (100)	41 (100)	51 (100)	360 (100)
O4–O7								
Combat	5 (13)	9 (24)	10 (26)	11 (32)	5 (13)	4 (13)	1 (4)	45 (18)
Accident	8 (21)	8 (21)	4 (10)	2 (6)	4 (10)	6 (20)	8 (30)	40 (16)
Natural	22 (58)	18 (47)	21 (54)	14 (41)	21 (54)	17 (57)	16 (59)	129 (53)
Suicide	1 (3)	3 (8)	4 (10)	7 (21)	5 (13)	3 (10)	1 (4)	24 (10)
Homicide	0 (0)	0 (0)	0 (0)	0 (0)	3 (8)	0 (0)	1 (4)	4 (2)
Undetermined	2 (5)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	3 (1)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	38 (100)	38 (100)	39 (100)	34 (100)	39 (100)	30 (100)	27 (100)	245 (100)

Notes: ^aIncludes active duty Regular Army, activated National Guard, and activated Army Reserve Soldiers. 22 cases were excluded because they were aged <18 or >64 (N=7) or were Cadets (N=15).

Table B-7. Crude Mortality Rates for the U.S. Army, Overall, 2005–2011^a

Category - Rate	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Combat	78.9	83.4	112.4	42.9	37.0	39.6	39.7	60.9
Accident	45.9	41.2	44.5	38.2	34.5	33.9	33.8	38.7
Natural	22.1	20.1	18.8	17.2	21.4	19.2	19.8	19.8
Suicide	13.0	15.9	17.9	20.6	22.6	23.0	23.8	19.7
Homicide	5.6	-	4.5	4.6	7.9	3.5	4.3	4.8
Total	167.9	165.4	201.3	125.9	126.4	121.0	125.1	146.5

Notes: ^aMortality rates per 100,000 Soldiers are presented. Rates based on < 20 deaths are considered to be unstable and are not presented here. Undetermined and pending death rates are also not presented here due to relatively few deaths per year. However, column Ns and total rates include undetermined and pending deaths.

Table B-8. Crude Mortality Rates for the U.S. Army, by Sex, 2005–2011^a

Sex - Rate	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Male								
Combat	90.2	96.2	128.5	49.7	42.5	45.4	45.0	69.9
Accident	50.9	45.5	48.8	41.5	38.1	37.7	37.3	42.7
Natural	23.6	21.3	19.9	15.8	21.3	18.8	19.5	20.0
Suicide	14.5	16.7	19.7	22.5	25.5	25.2	25.8	21.6
Homicide	5.5	-	4.7	4.3	8.0	3.8	4.0	4.7
Total	187.3	184.0	224.9	136.5	138.8	132.6	135.5	161.6
Female								
Combat	-	-	-	-	-	-	-	6.6
Accident	-	-	-	-	-	-	-	14.5
Natural	-	-	-	25.2	22.0	21.2	21.4	18.4
Suicide	-	-	-	-	-	-	-	7.9
Homicide	-	-	-	-	-	-	-	5.1
Total	50.9	54.1	57.3	61.0	51.1	49.4	61.3	55.0

Notes: ^aMortality rates per 100,000 Soldiers are presented. Rates based on < 20 deaths are considered to be unstable and are not presented here. Undetermined and pending death rates are also not presented here due to relatively few deaths per year. However, column Ns and total rates include undetermined and pending deaths.

Table B-9. Crude Mortality Rates for the U.S. Army, by Age Group, 2005–2011^a

Age Group - Rate	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Age 18–24								
Combat	97.0	112.8	170.3	55.9	48.9	64.5	56.4	86.2
Accident	61.7	54.9	62.5	55.9	51.0	43.1	40.5	52.9
Natural	-	-	9.3	-	-	-	-	6.7
Suicide	14.9	21.7	22.2	26.9	28.4	34.0	25.5	24.8
Homicide	-	-	9.8	-	13.0	-	-	7.2
Total	186.4	203.0	279.4	157.0	153.4	152.1	137.3	181.0
Age 25–34								
Combat	88.9	89.1	113.1	45.9	40.9	38.9	43.5	63.7
Accident	42.3	37.4	41.6	33.8	32.3	28.1	37.0	35.8
Natural	10.7	9.8	-	10.1	15.6	13.0	10.4	11.1
Suicide	14.5	11.6	16.0	14.9	25.3	22.7	26.9	19.3
Homicide	-	-	-	-	-	-	-	4.1
Total	164.6	151.5	182.5	111.2	121.9	108.2	127.1	136.4
Age 35–44								
Combat	50.0	40.2	46.6	27.3	20.6	13.6	18.6	30.8
Accident	31.3	22.2	27.4	23.3	17.4	31.8	19.3	24.7
Natural	37.3	27.1	27.4	22.0	29.0	28.6	29.3	28.7
Suicide	-	-	15.1	20.6	14.8	13.6	22.6	15.6
Homicide	-	-	-	-	-	-	-	2.5
Total	136.0	106.1	117.8	96.5	86.4	91.6	96.5	104.2

Table B-9. Crude Mortality Rates for the U.S. Army, by Age Group, 2005–2011^a (Continued)

Age Group - Rate	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
Age 45–64								
Combat	-	-	-	-	-	-	-	17.2
Accident	-	54.3	-	-	-	-	-	29.0
Natural	126.3	128.4	106.7	92.6	98.6	95.5	99.1	106.1
Suicide	-	-	-	-	-	-	-	8.9
Homicide	-	-	-	-	-	-	-	-
Total	196.5	244.4	174.7	143.5	146.9	140.2	145.7	168.2

Notes: ^aMortality rates per 100,000 Soldiers are presented. Rates based on < 20 deaths are considered to be unstable and are not presented here. Undetermined and pending death rates are also not presented here due to relatively few deaths per year. However, column Ns and total rates include undetermined and pending deaths.

Table B-10. Crude Mortality Rates for the U.S. Army, by Component, 2005–2011^a

Component - Rate	Year of Death (N = 6939)							
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	2005–2011 (N = 6939)
Regular Army								
Combat	66.8	91.8	129.7	46.0	37.9	47.2	42.4	64.8
Accident	41.0	41.3	44.0	40.5	33.8	32.2	33.2	37.8
Natural	12.0	13.4	13.8	10.6	16.3	13.8	16.0	13.7
Suicide	12.4	17.4	18.3	21.6	26.3	25.6	25.0	21.2
Homicide	5.4	-	4.9	5.5	8.1	3.6	4.1	4.9
Total	139.9	168.7	213.3	126.3	125.7	124.6	124.7	145.2
National Guard								
Combat	137.2	70.2	53.7	43.6	45.3	-	37.0	60.2
Accident	56.7	50.0	57.4	41.3	38.3	45.0	48.9	48.2
Natural	46.7	48.8	32.4	42.4	41.3	37.3	41.7	41.7
Suicide	-	-	-	-	-	-	-	16.4
Homicide	-	-	-	-	-	-	-	4.3
Total	267.1	180.9	178.4	151.3	146.0	116.3	160.9	174.0
Army Reserve								
Combat	71.5	-	36.7	-	-	-	-	27.5
Accident	64.1	-	-	-	33.8	33.6	-	32.1
Natural	55.1	36.5	45.8	38.3	33.8	42.0	-	40.0
Suicide	-	-	-	-	-	-	-	11.1
Homicide	-	-	-	-	-	-	-	-
Total	208.6	114.8	122.8	85.0	102.8	94.1	70.7	116.4

Notes: ^aMortality rates per 100,000 Soldiers are presented. Rates based on < 20 deaths are considered to be unstable and are not presented here. Undetermined and pending death rates are also not presented here due to relatively few deaths per year. However, column Ns and total rates include undetermined and pending deaths.

Table B-11. Crude Mortality Rates for the U.S. Army, by Rank, 2005–2011^a

Rank - Rate	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
E1–E4								
Combat	89.3	105.0	150.9	49.2	40.0	51.8	52.0	75.0
Accident	58.0	53.5	60.3	51.7	50.0	42.5	44.9	51.3
Natural	-	-	10.2	11.2	10.3	8.2	8.7	8.8
Suicide	18.4	24.0	22.3	27.4	30.8	31.3	28.5	26.3
Homicide	7.7	-	7.9	-	11.9	-	-	6.9
Total	181.8	197.7	257.2	148.3	147.3	141.5	144.8	172.2
E5–E9								
Combat	81.9	77.2	98.9	41.6	39.0	35.8	34.8	58.1
Accident	39.9	32.7	37.2	35.2	24.9	31.6	27.6	32.7
Natural	32.8	31.2	25.7	23.0	31.1	27.4	28.3	28.5
Suicide	10.3	10.8	16.4	16.5	17.6	21.8	25.0	16.9
Homicide	-	-	-	-	-	-	-	3.5
Total	172.1	153.3	183.0	123.8	119.6	120.7	123.3	141.9
W1–W5								
Combat	-	-	-	-	-	-	-	28.6
Accident	-	-	-	-	-	-	-	58.0
Natural	-	-	-	-	-	-	-	26.2
Suicide	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Total	177.6	186.7	135.7		130.1		112.8	123.9

Table B-11. Crude Mortality Rates for the U.S. Army, by Rank, 2005–2011^a (Continued)

Rank - Rate	Year of Death (N = 6939)							2005–2011 (N = 6939)
	2005 (N = 1111)	2006 (N = 1051)	2007 (N = 1295)	2008 (N = 851)	2009 (N = 899)	2010 (N = 859)	2011 (N = 873)	
O1–O3								
Combat	67.6	70.0	79.9	40.1	-	-	35.1	49.4
Accident	-	-	-	-	-	-	-	17.4
Natural	-	-	-	-	-	-	-	11.9
Suicide	-	-	-	-	-	-	-	11.9
Homicide	-	-	-	-	-	-	-	-
Total	129.3	119.9	117.8	72.6	77.7	70.5	85.3	95.0
O4–O7								
Combat	-	-	-	-	-	-	-	15.0
Accident	-	-	-	-	-	-	-	13.4
Natural	53.4	-	49.5	-	48.2	-	-	43.1
Suicide	-	-	-	-	-	-	-	8.0
Homicide	-	-	-	-	-	-	-	-
Total	92.2	91.0	91.9	79.8	89.4	68.5	61.7	81.9

Notes: ^aMortality rates per 100,000 Soldiers are presented. Rates based on < 20 deaths are considered to be unstable and are not presented here. Undetermined and pending death rates are also not presented here due to relatively few deaths per year. However, column Ns and total rates include undetermined and pending deaths.

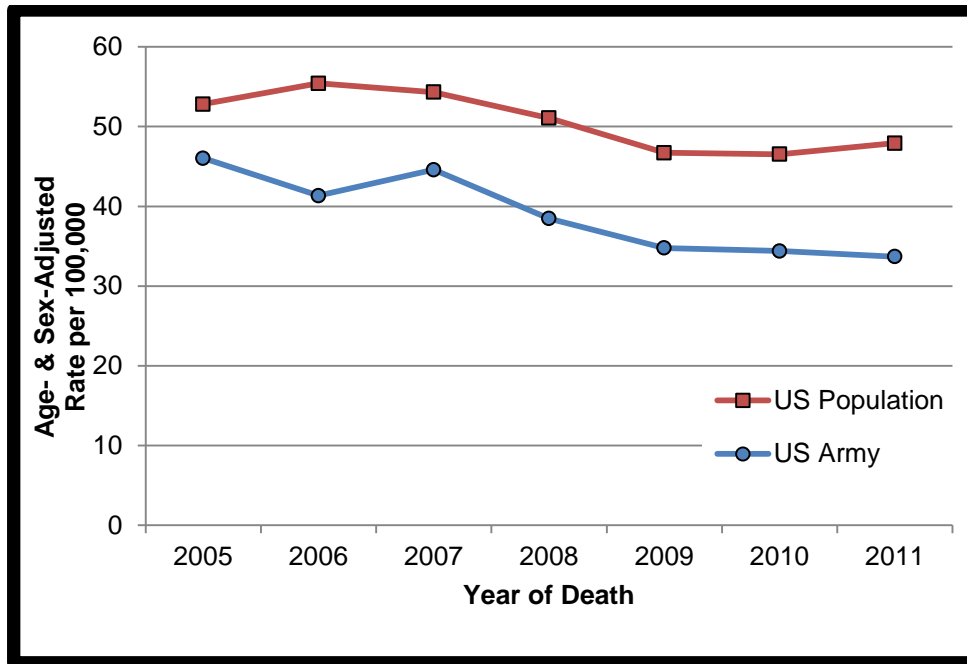


Figure B-1. Age- and Sex-Adjusted Rates of Death per 100,000 Persons for Accidents in the U.S. Army and U.S. Population, 2005–2011

Notes: Age- and sex-adjusted mortality rates per 100,000 persons are presented using the direct adjustment method. U.S. rates were calculated using available data from the CDC.¹ The 2004 Army population was used as a standard comparison population for both the U.S. Army and the U.S. population.

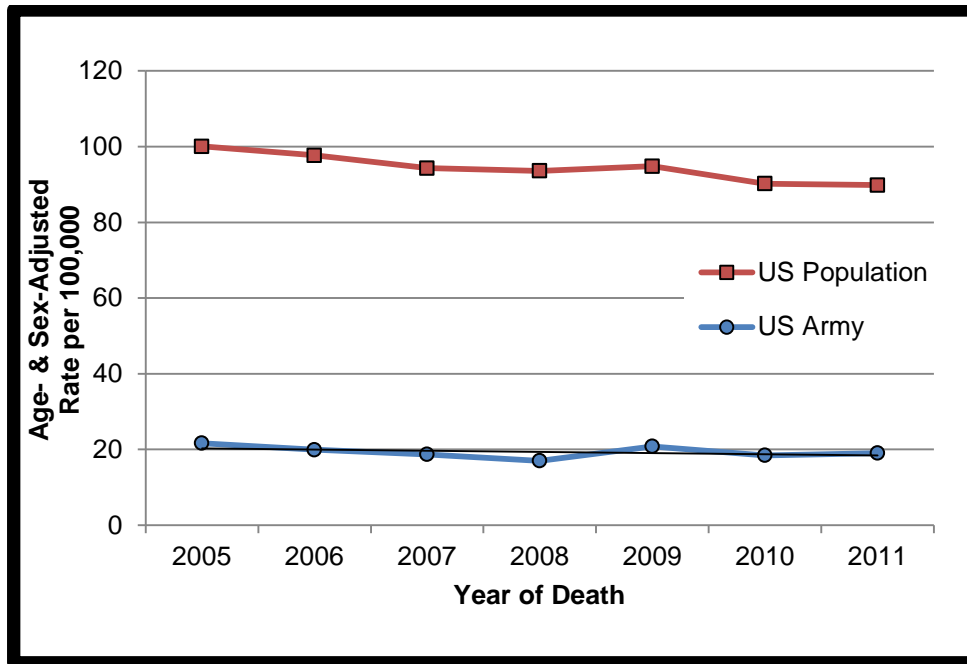


Figure B-2. Age- and Sex-Adjusted Rates of Death per 100,000 Persons for Natural Causes in the U.S. Army and U.S. Population, 2005–2011

Notes: Age- and sex-adjusted mortality rates per 100,000 persons are presented using the direct adjustment method. U.S. rates were calculated using available data from the CDC.¹ The 2004 Army population was used as a standard comparison population for both the U.S. Army and the U.S. population.

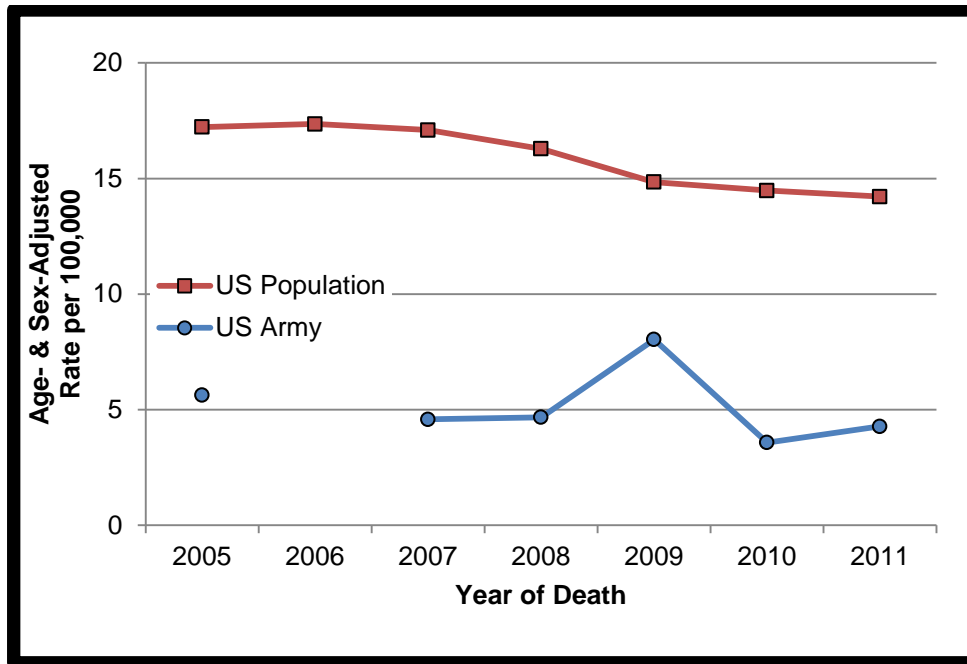


Figure B-3. Age- and Sex-Adjusted Rates of Death per 100,000 Persons for Homicides in the U.S. Army and U.S. Population, 2005–2011

Notes: Age- and sex-adjusted mortality rates per 100,000 persons are presented using the direct adjustment method. U.S. rates were calculated using available data from the CDC.¹ The 2004 Army population was used as a standard comparison population for both the U.S. Army and the U.S. population. The U.S. Army age- and sex-adjusted rate for homicide in 2006 is not presented here because it was based on < 20 deaths.

Table B-12. Age- and Sex-Adjusted Mortality Rates for the U.S. Army and U.S. Population, 2005–2010^a

Category - Rate	Accident		Natural		Suicide		Homicide	
	Army	US	Army	US	Army	US	Army	US
Year of Death								
2005	46.0 ^b	52.8	21.6 ^b	100.1	13.0 ^b	18.6	5.6 ^b	17.2
2006	41.3 ^b	55.4	19.9 ^b	97.7	15.9	18.7	-	17.4
2007	44.6 ^b	54.3	18.7 ^b	94.3	17.9	19.2	4.6 ^b	17.1
2008	38.5 ^b	51.1	17.0 ^b	93.6	20.7	19.2	4.7 ^b	16.3
2009	34.8 ^b	46.7	20.8 ^b	94.8	22.6	19.3	8.0 ^b	14.8
2010	34.4 ^b	46.5	18.4 ^b	90.2	23.4	20.2	3.6 ^b	14.5
2011	33.7 ^b	47.9	19.0 ^b	89.8	23.8	20.6	4.3 ^b	14.2
2005–2011	38.9 ^b	50.7	19.3 ^b	94.4	19.7	19.4	4.8 ^b	15.9

Notes: ^aAge- and sex-adjusted mortality rates per 100,000 persons are presented using the direct adjustment method. U.S. rates were calculated using available data from the CDC.¹ The 2004 Army population was used as a standard comparison population for both the U.S. Army and the U.S. population. Rates based on < 20 deaths are considered to be unstable and are not presented here. Undetermined and pending death rates are also not presented here due to relatively few deaths per year. Rates for combat deaths are also not presented here because there is no appropriate U.S. comparison. ^bDifferences between adjusted rates for the Army and the U.S. are statistically significant at p<.05.

Causes of Combat Deaths

Table B-13. Causes of Combat Deaths in the U.S. Army, Overall, 2005–2011

Category - N (%)	Year of Death (N = 2886)							2005–2011 (N = 2886)
	2005 (N = 522)	2006 (N = 530)	2007 (N = 723)	2008 (N = 290)	2009 (N = 263)	2010 (N = 281)	2011 (N = 277)	
Operations of War	522 (100)	530 (100)	723 (100)	290 (100)	261 (99)	281 (100)	268 (97)	2875 (100)
Other ^a	0 (0)	0 (0)	0 (0)	0 (0)	2 (1)	0 (0)	0 (0)	2 (<1)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (3)	9 (<1)

Note: ^aOther includes accidental drownings.

Causes of Accidental Deaths

Table B-14. Causes of Accidental Deaths in the U.S. Army, Overall, 2005–2011

Category - N (%)	Year of Death (N = 1832)							
	2005 (N = 304)	2006 (N = 262)	2007 (N = 286)	2008 (N = 258)	2009 (N = 245)	2010 (N = 241)	2011 (N = 236)	2005–2011 (N = 1832)
Motor Vehicle	171 (56)	114 (44)	121 (42)	114 (44)	102 (42)	84 (35)	87 (37)	793 (43)
Motorcycle	38 (13)	48 (18)	40 (14)	47 (18)	30 (12)	46 (19)	42 (18)	291 (16)
Air & Space Transportation	29 (10)	39 (15)	35 (12)	15 (6)	16 (7)	20 (8)	13 (6)	167 (9)
Other Transportation ^a	2 (1)	6 (2)	5 (2)	6 (2)	0 (0)	2 (1)	2 (1)	23 (1)
Drug/Alcohol Overdose ^b	30 (10)	31 (12)	46 (16)	50 (19)	69 (28)	61 (25)	56 (24)	343 (19)
Other ^c	34 (11)	24 (9)	39 (14)	26 (10)	28 (11)	28 (12)	32 (14)	211 (12)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (2)	4 (<1)

Notes: ^aOther transportation includes rail, water transport, and all other transportation. ^bDrug/alcohol overdose includes poisonings from other solids and liquids, including medications. ^cOther includes falls, drownings, poisonings from gases/vapors, and all other accidental deaths.

Table B-15. Causes of Accidental Deaths in the U.S. Army, by Sex, 2005–2011

Sex - N (%)	Year of Death (N = 1834)							2005–2011 (N = 1832)
	2005 (N = 304)	2006 (N = 262)	2007 (N = 286)	2008 (N = 258)	2009 (N = 245)	2010 (N = 241)	2011 (N = 236)	
Male								
Motor Vehicle	162 (56)	106 (43)	112 (41)	104 (43)	98 (42)	79 (34)	84 (38)	745 (43)
Motorcycle	37 (13)	48 (19)	39 (14)	47 (20)	28 (12)	45 (20)	40 (18)	284 (16)
Air & Space Transportation	26 (9)	38 (15)	35 (13)	15 (6)	16 (7)	19 (8)	12 (5)	161 (9)
Other Transportation ^a	2 (1)	4 (2)	5 (2)	6 (2)	0 (0)	2 (1)	2 (1)	21 (1)
Drug/Alcohol Overdose ^b	29 (10)	30 (12)	43 (16)	46 (19)	64 (27)	57 (25)	56 (25)	325 (19)
Other ^c	33 (11)	22 (9)	36 (13)	23 (10)	27 (12)	28 (12)	26 (12)	195 (11)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (2)	4 (<1)
Female								
Motor Vehicle	9 (60)	8 (57)	9 (56)	10 (59)	4 (33)	5 (45)	3 (25)	48 (49)
Motorcycle	1 (7)	0 (0)	1 (6)	0 (0)	2 (17)	1 (9)	2 (17)	7 (7)
Air & Space Transportation	3 (20)	1 (7)	0 (0)	0 (0)	0 (0)	1 (9)	1 (8)	6 (6)
Other Transportation ^a	0 (0)	2 (14)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (2)
Drug/Alcohol Overdose ^b	1 (7)	1 (7)	3 (19)	4 (24)	5 (42)	4 (36)	0 (0)	18 (19)
Other ^c	1 (7)	2 (14)	3 (19)	3 (18)	1 (8)	0 (0)	6 (50)	16 (16)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Notes: ^aOther transportation includes rail, water transport, and all other transportation. ^bDrug/alcohol overdose includes poisonings from other solids and liquids, including medications. ^cOther includes falls, drownings, poisonings from gases/vapors, and all other accidental deaths.

Table B-16. Causes of Accidental Deaths in the U.S. Army, by Age Group, 2005–2011

Age Group - N (%)	Year of Death (N = 1834)							2005–2011 (N = 1832)
	2005 (N = 304)	2006 (N = 262)	2007 (N = 286)	2008 (N = 258)	2009 (N = 245)	2010 (N = 241)	2011 (N = 236)	
Age 18–24								
Motor Vehicle	95 (66)	67 (54)	70 (50)	65 (50)	63 (52)	50 (51)	37 (42)	447 (53)
Motorcycle	11 (8)	18 (15)	14 (10)	20 (15)	10 (8)	11 (11)	20 (22)	104 (12)
Air & Space Transportation	7 (5)	8 (6)	13 (9)	2 (2)	3 (2)	3 (3)	0 (0)	36 (4)
Other Transportation ^a	0 (0)	2 (2)	3 (2)	3 (2)	0 (0)	1 (1)	1 (1)	10 (1)
Drug/Alcohol Overdose ^b	21 (14)	20 (16)	20 (14)	24 (18)	31 (25)	22 (22)	20 (22)	158 (19)
Other ^c	11 (8)	9 (7)	21 (15)	17 (13)	15 (12)	12 (12)	10 (11)	95 (11)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	1 (<1)
Age 25–34								
Motor Vehicle	50 (51)	29 (35)	31 (32)	34 (40)	31 (36)	19 (24)	36 (35)	230 (36)
Motorcycle	17 (17)	18 (21)	14 (15)	17 (20)	13 (15)	15 (19)	13 (13)	107 (17)
Air & Space Transportation	13 (13)	19 (23)	20 (21)	3 (4)	7 (8)	10 (13)	8 (8)	80 (13)
Other Transportation ^a	0 (0)	3 (4)	1 (1)	3 (4)	0 (0)	0 (0)	1 (1)	8 (1)
Drug/Alcohol Overdose ^b	4 (4)	7 (8)	18 (19)	24 (29)	27 (31)	28 (36)	28 (27)	136 (22)
Other ^c	15 (15)	8 (10)	12 (13)	3 (4)	9 (10)	6 (8)	15 (15)	68 (11)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (2)	2 (<1)
Age 35–44								
Motor Vehicle	23 (49)	11 (34)	18 (45)	14 (40)	5 (19)	13 (27)	8 (28)	92 (36)
Motorcycle	8 (17)	5 (16)	10 (25)	6 (17)	6 (22)	17 (35)	6 (21)	58 (22)
Air & Space Transportation	8 (17)	11 (34)	2 (5)	9 (26)	4 (15)	4 (8)	4 (14)	42 (16)
Other Transportation ^a	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	1 (<1)
Drug/Alcohol Overdose ^b	2 (4)	1 (3)	5 (13)	2 (6)	9 (33)	6 (12)	6 (21)	31 (12)
Other ^c	6 (13)	4 (13)	5 (13)	4 (11)	3 (11)	8 (16)	4 (14)	34 (13)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	1 (<1)

Table B-16. Causes of Accidental Deaths in the U.S. Army, by Age Group, 2005–2011 (Continued)

Age Group - N (%)	Year of Death (N = 1834)							2005–2011 (N = 1832)
	2005 (N = 304)	2006 (N = 262)	2007 (N = 286)	2008 (N = 258)	2009 (N = 245)	2010 (N = 241)	2011 (N = 236)	
Age 45–64								
Motor Vehicle	3 (23)	7 (32)	2 (22)	1 (13)	3 (33)	2 (13)	6 (40)	24 (26)
Motorcycle	2 (15)	7 (32)	2 (22)	4 (50)	1 (11)	3 (20)	3 (20)	22 (24)
Air & Space Transportation	1 (8)	1 (5)	0 (0)	1 (13)	2 (22)	3 (20)	1 (7)	9 (10)
Other Transportation ^a	2 (15)	1 (5)	1 (11)	0 (0)	0 (0)	0 (0)	0 (0)	4 (4)
Drug/Alcohol Overdose ^b	3 (23)	3 (14)	3 (33)	0 (0)	2 (22)	5 (33)	2 (13)	18 (20)
Other ^c	2 (15)	3 (14)	1 (11)	2 (25)	1 (11)	2 (13)	3 (20)	14 (15)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Notes: ^aOther transportation includes rail, water transport, and all other transportation. ^bDrug/alcohol overdose includes poisonings from other solids and liquids, including medications. ^cOther includes falls, drownings, poisonings from gases/vapors, and all other accidental deaths.

Table B-17. Causes of Accidental Deaths in the U.S. Army, by Component, 2005–2011

Component - N (%)	Year of Death (N = 1834)							2005–2011 (N = 1832)
	2005 (N = 304)	2006 (N = 262)	2007 (N = 286)	2008 (N = 258)	2009 (N = 245)	2010 (N = 241)	2011 (N = 236)	
Regular Army								
Motor Vehicle	112 (56)	89 (44)	87 (39)	91 (43)	75 (41)	63 (35)	65(35)	582 (42)
Motorcycle	28 (14)	38 (19)	28 (13)	40 (19)	24 (13)	32 (18)	34 (18)	224 (16)
Air & Space Transportation	17 (9)	32 (16)	33 (15)	7 (3)	13 (7)	11 (6)	11 (6)	124 (9)
Other Transportation ^a	1 (1)	5 (2)	2 (1)	6 (3)	0 (0)	2 (1)	2 (1)	18 (1)
Drug/Alcohol Overdose ^b	24 (12)	23 (11)	39 (17)	47 (22)	52 (28)	48 (27)	50 (27)	283 (20)
Other ^c	17 (9)	17 (8)	35 (16)	23 (11)	21 (11)	24 (13)	23 (12)	160 (11)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (1)	2 (<1)
National Guard								
Motor Vehicle	43 (69)	19 (45)	26 (57)	18 (50)	18 (47)	12 (29)	19 (46)	155 (51)
Motorcycle	3 (5)	5 (12)	8 (17)	7 (19)	4 (11)	9 (22)	6 (15)	42 (14)
Air & Space Transportation	4 (6)	5 (12)	2 (4)	7 (19)	1 (3)	8 (20)	2 (5)	29 (9)
Other Transportation ^a	1 (2)	1 (2)	3 (7)	0 (0)	0 (0)	0 (0)	0 (0)	5 (2)
Drug/Alcohol Overdose ^b	2 (3)	7 (17)	5 (11)	3 (8)	10 (26)	9 (22)	5 (12)	41 (13)
Other ^c	9 (15)	5 (12)	2 (4)	1 (3)	5 (13)	3 (7)	7 (17)	32 (10)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	2 (1)
Army Reserve								
Motor Vehicle	16 (37)	6 (38)	8 (50)	5 (63)	9 (41)	9 (45)	3 (38)	56 (42)
Motorcycle	7 (16)	5 (31)	4 (25)	0 (0)	2 (9)	5 (25)	2 (25)	25 (19)
Air & Space Transportation	8 (19)	2 (13)	0 (0)	1 (13)	2 (9)	1 (5)	0 (0)	14 (11)
Other Transportation ^a	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0(0)	0 (0)
Drug/Alcohol Overdose ^b	4 (9)	1 (6)	2 (13)	0 (0)	7 (32)	4 (20)	1 (13)	19 (14)
Other ^c	8 (19)	2 (13)	2 (13)	2 (25)	2 (9)	1 (5)	2 (25)	19 (14)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Notes: ^aOther transportation includes rail, water transport, and all other transportation. ^bDrug/alcohol overdose includes poisonings from other solids and liquids, including medications. ^cOther includes falls, drownings, poisonings from gases/vapors, and all other accidental deaths.

Causes of Natural Deaths

Table B-18. Causes of Natural Deaths in the U.S. Army, Overall, 2005–2011

Category - N (%)	Year of Death (N = 937)							2005–2011 (N = 937)
	2005 (N = 146)	2006 (N = 128)	2007 (N = 121)	2008 (N = 116)	2009 (N = 152)	2010 (N = 136)	2011 (N = 138)	
Neoplasms	64 (44)	51 (40)	50 (41)	46 (40)	70 (46)	60 (44)	69 (50)	410 (44)
Circulatory System	58 (40)	58 (45)	52 (43)	47 (41)	57 (38)	56 (41)	45 (33)	373 (40)
Other Natural Conditions ^a	24 (16)	19 (15)	19 (16)	23 (20)	24 (16)	20 (15)	22 (16)	151 (16)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	2 (1)	3 (<1)

Note: ^aOther natural conditions includes diseases related to: the nervous system, the respiratory system, the digestive system, the musculoskeletal system, mental and behavioral disorders, congenital malformations, blood, endocrine, skin, pregnancy, infections, and all other natural conditions.

Table B-19. Causes of Natural Deaths in the U.S. Army, by Sex, 2005–2011

Sex - N (%)	Year of Death (N = 937)							2005–2011 (N = 937)
	2005 (N = 146)	2006 (N = 128)	2007 (N = 121)	2008 (N = 116)	2009 (N = 152)	2010 (N = 136)	2011 (N = 138)	
Male								
Neoplasms	56 (42)	46 (40)	42 (38)	33 (36)	58 (45)	46 (40)	54 (46)	335 (41)
Circulatory System	58 (43)	55 (47)	52 (47)	42 (46)	52 (40)	51 (44)	42 (36)	352 (43)
Other Natural Conditions ^a	20 (15)	15 (13)	16 (15)	17 (18)	19 (15)	18 (16)	20 (17)	125 (15)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	1 (1)	2 (<1)
Female								
Neoplasms	8 (67)	5 (42)	8 (73)	13 (54)	12 (55)	14 (67)	15 (71)	75 (61)
Circulatory System	0 (0)	3 (25)	0 (0)	5 (21)	5 (23)	5 (24)	3 (14)	21 (17)
Other Natural Conditions ^a	4 (33)	4 (33)	3 (27)	6 (25)	5 (23)	2 (10)	2 (10)	26 (21)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (5)	1 (1)

Note: ^aOther natural conditions includes diseases related to: the nervous system, the respiratory system, the digestive system, the musculoskeletal system, mental and behavioral disorders, congenital malformations, blood, endocrine, skin, pregnancy, infections, and all other natural conditions.

Table B-20. Causes of Natural Deaths in the U.S. Army, by Age Group, 2005–2011

Age Group - N (%)	Year of Death (N = 937)							
	2005 (N = 146)	2006 (N = 128)	2007 (N = 121)	2008 (N = 116)	2009 (N = 152)	2010 (N = 136)	2011 (N = 138)	2005–2011 (N = 937)
Age 18–24								
Neoplasms	2 (18)	3 (20)	9 (43)	2 (11)	4 (22)	5 (56)	9 (56)	34 (31)
Circulatory System	4 (36)	4 (27)	4 (19)	10 (56)	6 (33)	3 (33)	2 (13)	33 (31)
Other Natural Conditions ^a	5 (45)	8 (53)	8 (38)	6 (33)	7 (39)	1 (11)	5 (31)	40 (37)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	1 (6)	0 (0)	0 (0)	1 (1)
Age 25–34								
Neoplasms	4 (16)	8 (36)	7 (44)	10 (40)	20 (48)	15 (42)	10 (34)	74 (38)
Circulatory System	11 (44)	12 (55)	5 (31)	9 (36)	15 (36)	15 (42)	13 (45)	80 (41)
Other Natural Conditions ^a	10 (40)	2 (9)	4 (25)	6 (24)	7 (17)	6 (17)	6 (21)	41 (21)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Age 35–44								
Neoplasms	29 (52)	14 (36)	15 (38)	13 (39)	21 (47)	15 (34)	21 (48)	128 (43)
Circulatory System	22 (39)	20 (51)	22 (55)	12 (36)	18 (40)	22 (50)	16 (36)	132 (44)
Other Natural Conditions ^a	5 (9)	5 (13)	3 (8)	8 (24)	6 (13)	7 (16)	6 (14)	40 (13)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	1 (<1)
Age 45–64								
Neoplasms	29 (54)	26 (50)	19 (43)	21 (53)	25 (53)	25 (53)	29 (59)	174 (52)
Circulatory System	21 (39)	22 (42)	21 (48)	16 (40)	18 (38)	16 (34)	14 (29)	128 (38)
Other Natural Conditions ^a	4 (7)	4 (8)	4 (9)	3 (8)	4 (9)	6 (13)	5 (10)	30 (9)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	1 (<1)

Note: ^aOther natural conditions includes diseases related to: the nervous system, the respiratory system, the digestive system, the musculoskeletal system, mental and behavioral disorders, congenital malformations, blood, endocrine, skin, pregnancy, infections, and all other natural conditions.

Table B-21. Causes of Natural Deaths in the U.S. Army, by Component, 2005–2011

Component - N (%)	Year of Death (N = 937)							2005–2011 (N = 937)
	2005 (N = 146)	2006 (N = 128)	2007 (N = 121)	2008 (N = 116)	2009 (N = 152)	2010 (N = 136)	2011 (N = 138)	
Regular Army								
Neoplasms	19 (33)	23 (35)	28 (40)	23 (41)	41 (46)	36 (47)	44 (49)	214 (42)
Circulatory System	25 (43)	30 (45)	28 (40)	25 (45)	32 (36)	29 (38)	30 (33)	199 (39)
Other Natural Conditions ^a	14 (24)	13 (20)	14 (20)	8 (14)	16 (18)	12 (16)	15 (17)	92 (18)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	1 (<1)
National Guard								
Neoplasms	28 (55)	20 (49)	11 (42)	12 (32)	17 (41)	13 (38)	17 (49)	118 (45)
Circulatory System	20 (39)	17 (41)	11 (42)	13 (35)	17 (41)	17 (50)	11 (31)	106 (40)
Other Natural Conditions ^a	3 (6)	4 (10)	4 (15)	12 (32)	6 (15)	4 (12)	6 (17)	39 (15)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	1 (3)	2 (1)
Reserve								
Neoplasms	17 (46)	8 (38)	11 (44)	11 (48)	12 (55)	11 (44)	8 (62)	78 (47)
Circulatory System	13 (35)	11 (52)	13 (52)	9 (39)	8 (36)	10 (40)	4 (31)	68 (41)
Other Natural Conditions ^a	7 (19)	2 (10)	1 (4)	3 (13)	2 (9)	4 (16)	1 (8)	20 (12)
Pending	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Note: ^aOther natural conditions includes diseases related to: the nervous system, the respiratory system, the digestive system, the musculoskeletal system, mental and behavioral disorders, congenital malformations, blood, endocrine, skin, pregnancy, infections, and all other natural conditions.

Causes of Suicides

Table B-22. Causes of Suicides in the U.S. Army, Overall, 2005–2011

Category - N (%)	Year of Death (N = 931)							2005–2011 (N = 931)
	2005 (N = 86)	2006 (N = 101)	2007 (N = 115)	2008 (N = 139)	2009 (N = 161)	2010 (N = 163)	2011 (N = 166)	
Gunshot Wound	65 (76)	71 (70)	71 (62)	100 (72)	100 (62)	112 (69)	116 (70)	635 (68)
Hanging/Asphyxiation	12 (14)	19 (19)	25 (22)	24 (17)	36 (22)	34 (21)	34 (20)	184 (20)
Drug/Alcohol Overdose ^a	5 (6)	8 (8)	8 (7)	10 (7)	11 (7)	7 (4)	10 (6)	59 (6)
Other ^b	4 (5)	3 (3)	11 (10)	5 (4)	14 (9)	10 (6)	6 (4)	53 (6)

Notes: ^aDrug/alcohol overdose includes poisonings from other solids and liquids, including medications. ^bOther includes carbon monoxide and other gas/vapor poisonings, jumping from a high place, and all other means.

Table B-23. Causes of Suicides in the U.S. Army, by Sex, 2005–2011

Sex - N (%)	Year of Death (N = 931)							2005–2011 (N = 931)
	2005 (N = 86)	2006 (N = 101)	2007 (N = 115)	2008 (N = 139)	2009 (N = 161)	2010 (N = 163)	2011 (N = 166)	
Male								
Gunshot Wound	63 (77)	64 (70)	66 (61)	95 (73)	98 (63)	109 (71)	110 (71)	605 (69)
Hanging/Asphyxiation	11 (13)	18 (20)	24 (22)	22 (17)	35 (22)	30 (19)	30 (19)	170 (19)
Drug/Alcohol Overdose ^a	4 (5)	6 (7)	8 (7)	9 (7)	10 (6)	6 (4)	9 (6)	52 (6)
Other ^b	4 (5)	3 (3)	11 (10)	5 (4)	13 (8)	9 (6)	6 (4)	51 (6)
Female								
Gunshot Wound	2 (50)	7 (70)	5 (83)	5 (63)	2 (40)	3 (33)	6 (55)	30 (57)
Hanging/Asphyxiation	1 (25)	1 (10)	1 (17)	2 (25)	1 (20)	4 (44)	4 (36)	14 (26)
Drug/Alcohol Overdose ^a	1 (25)	2 (20)	0 (0)	1 (13)	1 (20)	1 (11)	1 (9)	7 (13)
Other ^b	0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	1 (11)	0 (0)	2 (4)

Notes: ^aDrug/alcohol overdose includes poisonings from other solids and liquids, including medications. ^bOther includes carbon monoxide and other gas/vapor poisonings, jumping from a high place, and all other means.

Table B-24. Causes of Suicides in the U.S. Army, by Age Group, 2005–2011

Age Group - N (%)	Year of Death (N = 931)							2005–2011 (N = 931)
	2005 (N = 86)	2006 (N = 101)	2007 (N = 115)	2008 (N = 139)	2009 (N = 161)	2010 (N = 163)	2011 (N = 166)	
Age 18–24								
Gunshot Wound	27 (77)	37 (76)	38 (76)	52 (83)	41 (60)	53 (68)	32 (57)	280 (70)
Hanging/Asphyxiation	8 (23)	10 (20)	10 (20)	9 (14)	14 (21)	15 (19)	16 (29)	82 (21)
Drug/Alcohol Overdose ^a	0 (0)	2 (4)	1 (2)	2 (3)	5 (7)	4 (5)	5 (9)	19 (5)
Other ^b	0 (0)	0 (0)	1 (2)	0 (0)	8 (12)	6 (8)	3 (5)	18 (5)
Age 25–34								
Gunshot Wound	27 (79)	19 (73)	22 (59)	25 (68)	40 (59)	48 (76)	61 (81)	242 (71)
Hanging/Asphyxiation	3 (9)	5 (19)	7 (19)	6 (16)	18 (26)	11 (17)	10 (13)	60 (18)
Drug/Alcohol Overdose ^a	3 (9)	1 (4)	4 (11)	4 (11)	4 (6)	3 (5)	2 (3)	21 (6)
Other ^b	1 (3)	1 (4)	4 (11)	2 (5)	6 (9)	1 (2)	2 (3)	17 (5)
Age 35–44								
Gunshot Wound	11 (73)	10 (56)	10 (45)	16 (52)	18 (78)	11 (52)	23 (68)	99 (60)
Hanging/Asphyxiation	1 (7)	2 (11)	5 (23)	8 (26)	3 (13)	8 (38)	8 (24)	35 (21)
Drug/Alcohol Overdose ^a	1 (7)	5 (28)	3 (14)	4 (13)	2 (9)	0 (0)	2 (6)	17 (10)
Other ^b	2 (13)	1 (6)	4 (18)	3 (10)	0 (0)	2 (10)	1 (3)	13 (8)
Age 45–64								
Gunshot Wound	0 (0)	5 (63)	1 (17)	7 (88)	1 (50)	0 (0)	0 (0)	14 (50)
Hanging/Asphyxiation	0 (0)	2 (25)	3 (50)	1 (13)	1 (50)	0 (0)	0 (0)	7 (25)
Drug/Alcohol Overdose ^a	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	2 (7)
Other ^b	1 (50)	1 (13)	2 (33)	0 (0)	0 (0)	1 (100)	0 (0)	5 (18)

Notes: ^aDrug/alcohol overdose includes poisonings from other solids and liquids, including medications. ^bOther includes carbon monoxide and other gas/vapor poisonings, jumping from a high place, and all other means.

Table B-25. Causes of Suicides in the U.S. Army, by Component, 2005–2011

Component - N (%)	Year of Death (N = 931)							2005–2011 (N = 931)
	2005 (N = 86)	2006 (N = 101)	2007 (N = 115)	2008 (N = 139)	2009 (N = 161)	2010 (N = 163)	2011 (N = 166)	
Regular Army								
Gunshot Wound	46 (77)	63 (73)	58 (62)	81 (71)	86 (60)	101 (71)	95 (67)	530 (68)
Hanging/Asphyxiation	10 (17)	15 (17)	20 (22)	20 (18)	35 (24)	29 (20)	32 (23)	161 (21)
Drug/Alcohol Overdose ^a	1 (2)	6 (7)	7 (8)	9 (8)	10 (7)	5 (3)	9 (6)	47 (6)
Other ^b	3 (5)	2 (2)	8 (9)	4 (4)	13 (9)	8 (6)	5 (4)	43 (6)
National Guard								
Gunshot Wound	13 (72)	3 (60)	11 (58)	14 (82)	12 (80)	9 (69)	15 (88)	77 (74)
Hanging/Asphyxiation	1 (6)	2 (40)	5 (26)	1 (6)	1 (7)	2 (15)	0 (0)	12 (12)
Drug/Alcohol Overdose ^a	3 (17)	0 (0)	1 (5)	1 (6)	1 (7)	0 (0)	1 (6)	7 (7)
Other ^b	1 (6)	0 (0)	2 (11)	1 (6)	1 (7)	2 (15)	1 (6)	8 (8)
Reserve								
Gunshot Wound	6 (75)	5 (50)	2 (67)	5 (63)	2 (100)	2 (29)	6 (75)	28 (61)
Hanging/Asphyxiation	1 (13)	2 (20)	0 (0)	3 (38)	0 (0)	3 (43)	2 (25)	11 (24)
Drug/Alcohol Overdose ^a	1 (13)	2 (20)	0 (0)	0 (0)	0 (0)	2 (29)	0 (0)	5 (11)
Other ^b	0 (0)	1 (10)	1 (33)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)

Notes: ^aDrug/alcohol overdose includes poisonings from other solids and liquids, including medications. ^bOther includes carbon monoxide and other gas/vapor poisonings, jumping from a high place, and all other means.

Causes of Homicides

Table B-26. Causes of Homicides in the U.S. Army, Overall, 2005–2011

Category - N (%)	Year of Death (N = 225)							2005–2011 (N = 225)
	2005 (N = 37)	2006 (N = 17)	2007 (N = 29)	2008 (N = 31)	2009 (N = 56)	2010 (N = 25)	2011 (N = 30)	
Gunshot Wound	21 (57)	13 (76)	20 (69)	22 (71)	43 (77)	14 (56)	23 (77)	156 (69)
Sharp Object	6 (16)	2 (12)	5 (17)	5 (16)	5 (9)	6 (24)	2 (7)	31 (14)
Other ^a	9 (24)	2 (12)	3 (10)	2 (6)	4 (7)	3 (12)	3 (10)	26 (12)
Legal Intervention ^b	1 (3)	0 (0)	1 (3)	2 (6)	4 (7)	2 (8)	2 (7)	12 (5)

Notes: ^aOther includes strangulation, blunt object, bodily force, and all other means. ^bLegal intervention includes legal execution and deaths by police or other law-enforcing agents.

Table B-27. Causes of Homicides in the U.S. Army, by Sex, 2005–2011

Sex - N (%)	Year of Death (N = 225)							2005–2011 (N = 225)
	2005 (N = 37)	2006 (N = 17)	2007 (N = 29)	2008 (N = 31)	2009 (N = 56)	2010 (N = 25)	2011 (N = 30)	
Male								
Gunshot Wound	18 (58)	11 (85)	18 (69)	18 (72)	38 (78)	14 (61)	18 (75)	135 (71)
Sharp Object	4 (13)	1 (8)	4 (15)	4 (16)	3 (6)	4 (17)	1 (4)	21 (11)
Other ^a	8 (26)	1 (8)	3 (12)	1 (4)	4 (8)	3 (13)	3 (13)	23 (12)
Legal Intervention ^b	1 (3)	0 (0)	1 (4)	2 (8)	4 (8)	2 (9)	2 (8)	12 (6)
Female								
Gunshot Wound	3 (50)	2 (50)	2 (67)	4 (67)	5 (71)	0 (0)	5 (83)	21 (62)
Sharp Object	2 (33)	1 (25)	1 (33)	1 (17)	2 (29)	2 (100)	1 (17)	10 (29)
Other ^a	1 (17)	1 (25)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	3 (9)
Legal Intervention ^b	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Notes: ^aOther includes strangulation, blunt object, bodily force, and all other means. ^bLegal intervention includes legal execution and deaths by police or other law-enforcing agents.

Table B-28. Causes of Homicides in the U.S. Army, by Age Group, 2005–2011

Age Group - N (%)	Year of Death (N = 225)							2005–2011 (N = 225)
	2005 (N = 37)	2006 (N = 17)	2007 (N = 29)	2008 (N = 31)	2009 (N = 56)	2010 (N = 25)	2011 (N = 30)	
Age 18–24								
Gunshot Wound	12 (71)	9 (100)	15 (68)	14 (78)	23 (74)	6 (60)	6 (67)	85 (73)
Sharp Object	1 (6)	0 (0)	5 (23)	3 (17)	4 (13)	4 (40)	1 (11)	18 (16)
Other ^a	3 (18)	0 (0)	2 (9)	1 (6)	3 (10)	0 (0)	0 (0)	9 (8)
Legal Intervention ^b	1 (6)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	2 (22)	4 (3)
Age 25–34								
Gunshot Wound	7 (47)	2 (50)	3 (60)	8 (62)	11 (79)	4 (44)	9 (75)	44 (61)
Sharp Object	4 (27)	0 (0)	0 (0)	2 (15)	1 (7)	2 (22)	1 (8)	10 (14)
Other ^a	4 (27)	2 (50)	1 (20)	1 (8)	0 (0)	2 (22)	2 (17)	12 (17)
Legal Intervention ^b	0 (0)	0 (0)	1 (20)	2 (15)	2 (14)	1 (11)	0 (0)	6 (8)
Age 35–44								
Gunshot Wound	1 (25)	2 (50)	2 (100)	0 (0)	2 (50)	3 (60)	6 (86)	16 (62)
Sharp Object	1 (25)	2 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (12)
Other ^a	2 (50)	0 (0)	0 (0)	0 (0)	1 (25)	1 (20)	1 (14)	5 (19)
Legal Intervention ^b	0 (0)	0 (0)	0 (0)	0 (0)	1 (25)	1 (20)	0 (0)	2 (8)
Age 45–64								
Gunshot Wound	1 (100)	0 (0)	0 (0)	0 (0)	7 (100)	1 (100)	2 (100)	11 (100)
Sharp Object	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Other ^a	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Legal Intervention ^b	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Notes: ^aOther includes strangulation, blunt object, bodily force, and all other means. ^bLegal intervention includes legal execution and deaths by police or other law-enforcing agents.

Table B-29. Causes of Homicides in the U.S. Army, by Component, 2005–2011

Component - N (%)	Year of Death (N = 225)							2005–2011 (N = 225)
	2005 (N = 37)	2006 (N = 17)	2007 (N = 29)	2008 (N = 31)	2009 (N = 56)	2010 (N = 25)	2011 (N = 30)	
Regular Army								
Gunshot Wound	16 (62)	10 (71)	17 (68)	21 (72)	32 (73)	11 (55)	16 (70)	123 (68)
Sharp Object	4 (15)	2 (14)	4 (16)	4 (14)	5 (11)	5 (25)	2 (9)	26 (14)
Other ^a	5 (19)	2 (14)	3 (12)	2 (7)	4 (9)	2 (10)	3 (13)	21 (12)
Legal Intervention ^b	1 (4)	0 (0)	1 (4)	2 (7)	3 (7)	2 (10)	2 (9)	11 (6)
National Guard								
Gunshot Wound	3 (38)	3 (100)	2 (67)	0 (0)	2 (67)	1 (50)	7 (100)	18 (67)
Sharp Object	1 (13)	0 (0)	1 (33)	1 (100)	0 (0)	0 (0)	0 (0)	3 (11)
Other ^a	4 (50)	0 (0)	0 (0)	0 (0)	0 (0)	1 (50)	0 (0)	5 (19)
Legal Intervention ^b	0 (0)	0 (0)	0 (0)	0 (0)	1 (33)	0 (0)	0 (0)	1 (4)
Reserve								
Gunshot Wound	2 (67)	0 (0)	1 (100)	1 (100)	9 (100)	2 (67)	0 (0)	15 (88)
Sharp Object	1 (33)	0 (0)	0 (0)	0 (0)	0 (0)	1 (33)	0 (0)	2 (12)
Other ^a	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Legal Intervention ^b	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Notes: ^aOther includes strangulation, blunt object, bodily force, and all other means. ^bLegal intervention includes legal execution and deaths by police or other law-enforcing agents.

Glossary

Acronyms

ACE

Ask, Care, Escort

AFMES

Armed Forces Medical Examiner System

AMEDD 2020

Army Medicine 2020 Campaign Plan

AR

Army Regulation

Army STARRS

Army Study to Assess Risk and Resilience in Service Members

ASAP

Army Substance Abuse Program

ASIST

Applied Suicide Intervention Skills Training

BSHOP

Behavioral and Social Health Outcomes Program

CATEP

Confidential Alcohol Treatment and Education Program

CDC

Centers for Disease Control and Prevention

DOD

Department of Defense

E1–E9

Enlisted rank

MMP

Motorcycle Mentorship Program

OTSG

Office of the Surgeon General of the U.S. Army

O1–O7

Officer rank

PCM

Primary Care Manager

POM

Privately owned motorcycle

POME

Polypharmacy and Overdose Medical Education

POV

Privately owned vehicle

R2

Ready and Resilient Campaign Plan

SPP

Sole Provider Program

TRiPS

Travel Risk Planning System

U.S.

United States

APHC

Army Public Health Center – Provisional

W1–W5

Warrant Officer rank