

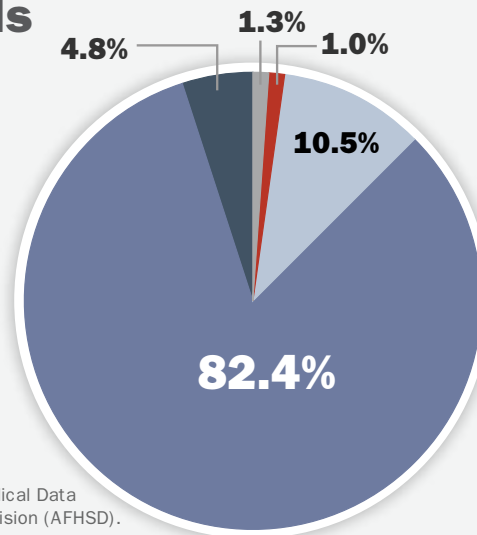


DoD Numbers for Traumatic Brain Injury Worldwide — Totals

2000–2020 Q4

Penetrating	5,502
Severe	4,492
Moderate	45,477
Mild	358,088
Not Classifiable	21,059

Total - All Severities 434,618



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

*Percentage may not add to 100% due to rounding.

2000–2020 Q4, as of Feb 16, 2021

Definitions and Revisions

Note: In March 2020, due to Health Protection Condition (HPCON) in response to the COVID-19 pandemic, Service member operations, training, and leisure activities, activities at higher injury risk, were curtailed by base operations in response to public health recommendations. Additionally, due to restrictions placed on MHS hospitals and clinics, many services and procedures were reduced or suspended, impacting access to care and care seeking behavior and thus data shown in this report.¹

Effective March 2020, the Armed Forces Health Surveillance Division (AFHSD) resumed the distribution of data from the Defense Medical Surveillance System (DMSS) used in this report. The current report reflects up-to-date data from the AFHSD since 2000.

From 2018 (Q2) through 2019 (Q3), AFHSD temporarily halted the distribution of this report and the Traumatic Brain Injury Center of Excellence (TBICoE) used the MHS Data Repository to ensure this report was completed on a timely basis. While TBICoE used a different data source, the approach was consistent with the historical methodology.

Effective October 2015, the International Classification of Diseases was updated. With the improved information, more moderate traumatic brain injuries can be counted. Previously, some cases were categorized as “unclassifiable” severity due to more limited surveillance information. Also in 2015, the Assistant Secretary of Defense clarified the TBI case definition. A subsequent review found that some of the remaining “unclassifiable” cases were likely moderate TBI. This change also will contribute to higher counts of moderate TBI surveillance cases.

Worldwide numbers represent medical diagnoses of TBI that occurred anywhere U.S. forces are located including the continental United States since 2000.

Concussion/Mild TBI is characterized by the following: Confused or disoriented state which lasts less than 24 hours; or loss of consciousness for up to 30 minutes; or memory loss lasting less than 24 hours. Excludes penetrating TBI. A CT scan is not indicated for most patients with a Mild TBI. If obtained, it is normal.

Moderate TBI is characterized by the following: Confused or disoriented state which lasts more than 24 hours; or loss of consciousness for more than 30 minutes, but less than 24 hours; or memory loss lasting greater than 24 hours but less than seven days; or meets criteria for Mild TBI except an abnormal CT scan is present. Excludes penetrating TBI. A structural brain imaging study may be normal or abnormal.

Severe TBI is characterized by the following: Confused or disoriented state which lasts more than 24 hours; or loss of consciousness for more than 24 hours; or memory loss for more than seven days. Excludes penetrating TBI. A structural brain imaging study may be normal but usually is abnormal.

Penetrating TBI, or open head injury, is characterized by the following: A head injury in which the scalp, skull and dura mater (the outer layer of the meninges) are penetrated. Penetrating injuries can be caused by high-velocity projectiles or objects of lower velocity such as knives, or home fragments from a skull fracture that are driven into the brain.

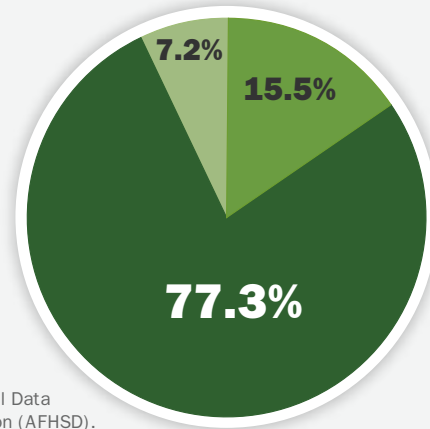
¹ <https://www.health.mil/Reference-Center/Policies/2020/03/24/Elective-Surgical-Invasive-and-Dental-Procedures-in-Military-Treatment-Facilities>



DoD Numbers for Traumatic Brain Injury Worldwide — Army

2000–2020 Q4

Active	196,797
Guard	39,303
Reserve	18,362
Total - Army	254,462



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

2000–2020 Q4, as of Feb 16, 2021

Service	Component	Severity	Diagnosed
Army	Active	Penetrating	2,655
		Severe	2,062
		Moderate	19,958
		Mild	160,496
		Not Classifiable	11,626
	Guard	Penetrating	519
		Severe	402
		Moderate	3,835
		Mild	32,290
		Not Classifiable	2,257
	Reserve	Penetrating	180
		Severe	199
		Moderate	1,833
		Mild	15,020
		Not Classifiable	1,130

2000-2020 Q4, as of Feb 16, 2021

Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

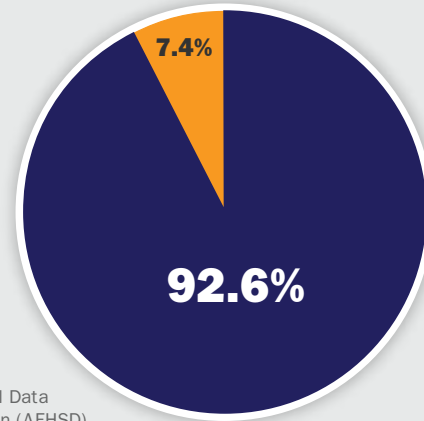


DoD Numbers for Traumatic Brain Injury Worldwide — Navy

2000–2020 Q4

Active	54,889
Reserve	4,410

Total - Navy **59,299**



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

2000–2020 Q4, as of Feb 16, 2021

Service	Component	Severity	Diagnosed
Navy	Active	Penetrating	644
		Severe	532
		Moderate	6,303
		Mild	45,148
		Not Classifiable	2,262
	Reserve	Penetrating	48
		Severe	33
		Moderate	474
		Mild	3,688
		Not Classifiable	167

2000-2020 Q4, as of Feb 16, 2021

Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

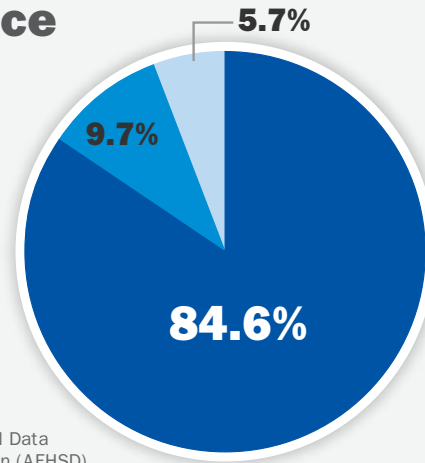


DoD Numbers for Traumatic Brain Injury Worldwide — Air Force

2000–2020 Q4

Active	50,295
Guard	5,757
Reserve	3,380

Total - Air Force 59,432



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

*Percentage may not add to 100% due to rounding.
Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

2000–2020 Q4, as of Feb 16, 2021

Service	Component	Severity	Diagnosed
Air Force	Active	Penetrating	533
		Severe	470
		Moderate	5,088
		Mild	42,887
		Not Classifiable	1,317
	Guard	Penetrating	58
		Severe	45
		Moderate	636
		Mild	4,867
		Not Classifiable	151
	Reserve	Penetrating	34
		Severe	29
		Moderate	372
		Mild	2,851
		Not Classifiable	94

2000-2020 Q4, as of Feb 16, 2021

Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

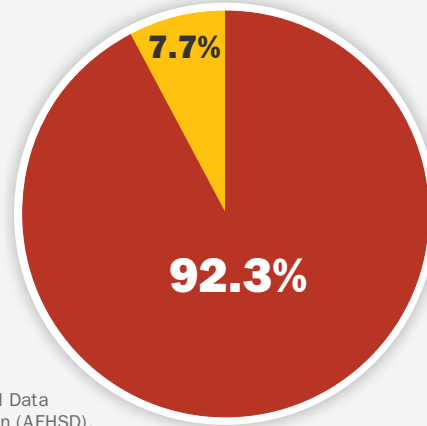


DoD Numbers for Traumatic Brain Injury Worldwide — Marines

2000–2020 Q4

Active	56,698
Reserve	4,727

Total - Marines **61,425**



Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)

2000–2020 Q4, as of Feb 16, 2021

Service	Component	Severity	Diagnosed
Marines	Active	Penetrating	763
		Severe	663
		Moderate	6,478
		Mild	46,935
		Not Classifiable	1,859
	Reserve	Penetrating	68
		Severe	57
		Moderate	500
		Mild	3,906
		Not Classifiable	196

2000-2020 Q4, as of Feb 16, 2021

Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Division (AFHSD).

Prepared by the Traumatic Brain Injury Center of Excellence (TBICoE)