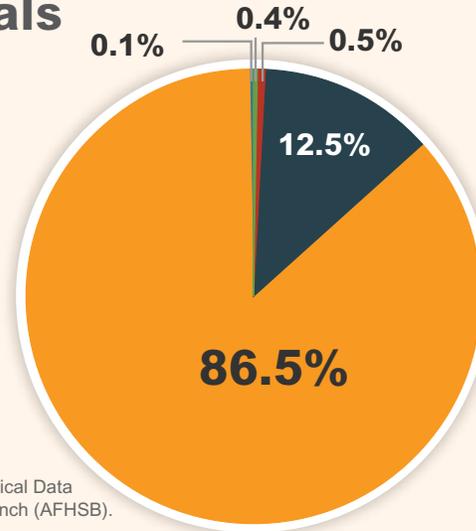




# DoD Numbers for Traumatic Brain Injury Worldwide — Totals

## 2019 Q1-Q4

Penetrating	75
Severe	104
Moderate	2,449
Mild	16,927
Not Classifiable	10
<b>Total - All Severities</b>	<b>19,565</b>



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

Prepared by the Defense and Veterans Brain Injury Center (DVBIC)

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

2019 Q1-Q4, as of March 10, 2020

## Definitions and Revisions

Effective March 2020, the Armed Forces Health Surveillance Branch (AFHSB) 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 AFHSB since 2000.

From 2018 (Q2) through 2019 (Q3), AFHSB temporarily halted the distribution of this report and the Defense and Veterans Brain Injury Center (DVBIC) used the MHS Data Repository to ensure this report was completed on a timely basis. While DVBIC 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.

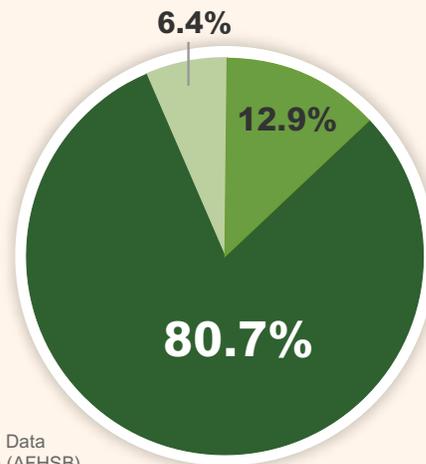
**Penetrating TBI, or open head injury, is characterized by the following:** A head injury in which the scalp, skull and dura mater (the outer layer of the meninges) are penetrated. Penetrating injuries can be caused by high-velocity projectiles or objects of lower velocity such as knives, or home fragments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



# DoD Numbers for Traumatic Brain Injury Worldwide — Army

2019 Q1-Q4

Active	9,108
Guard	1,461
Reserve	723
<b>Total - Army</b>	<b>11,292</b>



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

Prepared by the Defense and Veterans Brain Injury Center (DVBIC)

2019 Q1-Q4, as of March 10, 2020

Service	Component	Severity	Diagnosed
Army	Active	Penetrating	29
		Severe	51
		Moderate	1,065
		Mild	7,963
	Guard	Penetrating	4
		Severe	11
		Moderate	241
		Mild	1,205
	Reserve	Penetrating	6
		Severe	5
		Moderate	92
		Mild	620

2019 Q1-Q4, as of March 10, 2020

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

Prepared by the Defense and Veterans Brain Injury Center (DVBIC)

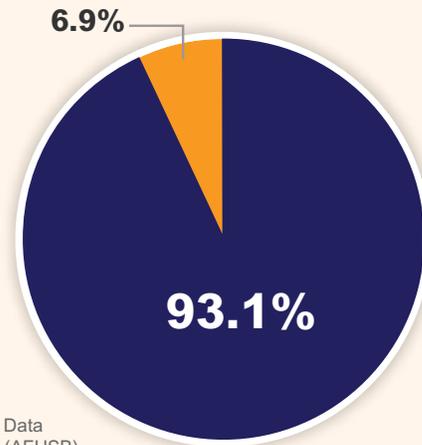


## DoD Numbers for Traumatic Brain Injury Worldwide — Navy

2019 Q1-Q4

Active	2,581
Reserve	192

**Total - Navy** **2,773**



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

Prepared by the Defense and Veterans Brain Injury Center (DVBIC)

2019 Q1-Q4, as of March 10, 2020

Service	Component	Severity	Diagnosed
Navy	Active	Penetrating	14
		Severe	15
		Moderate	302
		Mild	2,242
		Not Classifiable	8
	Reserve	Penetrating	3
		Severe	1
		Moderate	28
		Mild	160
		Not Classifiable	-

2019 Q1-Q4, as of March 10, 2020

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

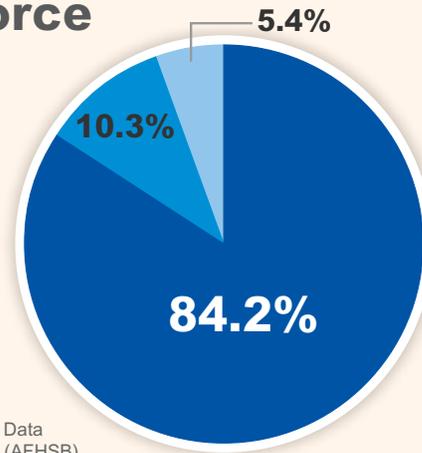
Prepared by the Defense and Veterans Brain Injury Center (DVBIC)



## DoD Numbers for Traumatic Brain Injury Worldwide — Air Force

2019 Q1-Q4

Active	2,388
Guard	293
Reserve	154
<b>Total - Air Force</b>	<b>2,835</b>



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

Prepared by the Defense and Veterans Brain Injury Center (DVBIC)

2019 Q1-Q4, as of March 10, 2020

Service	Component	Severity	Diagnosed
Air Force	Active	Penetrating	9
		Severe	13
		Moderate	285
		Mild	2,081
	Guard	Penetrating	2
		Severe	-
		Moderate	52
		Mild	239
	Reserve	Penetrating	1
		Severe	-
		Moderate	27
		Mild	126

2019 Q1-Q4, as of March 10, 2020

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

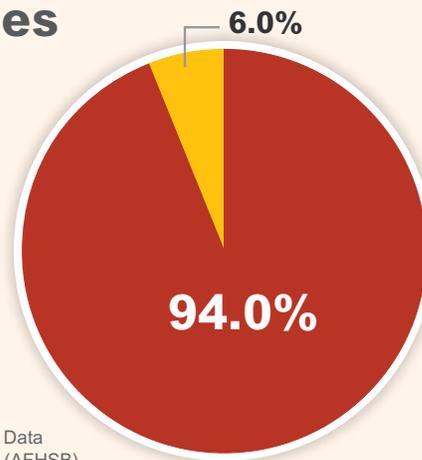
Prepared by the Defense and Veterans Brain Injury Center (DVBIC)



# DoD Numbers for Traumatic Brain Injury Worldwide — Marines

2019 Q1-Q4

Active	2,506
Reserve	159
<b>Total - Marines</b>	<b>2,665</b>



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

Prepared by the Defense and Veterans Brain Injury Center (DVBIC)

2019 Q1-Q4, as of March 10, 2020

Service	Component	Severity	Diagnosed
Marines	Active	Penetrating	6
		Severe	7
		Moderate	332
		Mild	2,159
		Not Classifiable	2
	Reserve	Penetrating	1
		Severe	1
		Moderate	25
		Mild	132
		Not Classifiable	-

2019 Q1-Q4, as of March 10, 2020

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

Prepared by the Defense and Veterans Brain Injury Center (DVBIC)