



DEPARTMENT OF THE NAVY  
BUREAU OF MEDICINE AND SURGERY  
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6000  
IN REPLY REFER TO  
Ser M3/E07UN093-000592

DEC 13 2007

MEMORANDUM FOR COMMANDER, NAVY MEDICINE EAST  
COMMANDER, NAVY MEDICINE WEST  
COMMANDER, NAVY MEDICINE NATIONAL CAPITAL AREA

Subj: POLICY GUIDANCE FOR TRAUMATIC BRAIN INJURY (TBI): DEFINITION  
AND REPORTING

- Encl: (1) DoD Definition of Traumatic Brain Injury (TBI)  
(2) Navy Medicine Monthly TBI Tracking Report  
(3) TBI Reporting Database Rules  
(4) 2007 ICD-9 CM Volume 1 Diagnosis Codes  
(5) FY-08 TBI V-Codes

1. Traumatic Brain Injury (TBI) is a significant health concern for the Department of Defense (DoD). DoD's TBI program must be based on a clear definition of TBI, and a consistent means of reporting the data. To this end, the Assistant Secretary of Defense for Health Affairs released a memorandum outlining definition and reporting requirements for Traumatic Brain Injury (TBI).
2. This memorandum serves as initial guidance for newly established TBI reporting requirements. These measures represent a unified step toward the diagnosis and treatment of TBI within DoD.
3. Effective immediately, INCONUS Military Treatment Facilities (MTFs), inpatient and outpatient, will report all identified TBI cases. Until automated reporting tools are restructured, this data will be collected and reported via manual means. Enclosure (1) provides a standardized definition for TBI and severity of brain injury stratification criteria. Of note is that mild TBI is now classified by a Loss of Consciousness (LOC) < 30 minutes, while moderate TBI is classified by a LOC of >30 or < 60 minutes. Enclosure (2) is the EXCEL TBI reporting format. This report will be recorded in full and without format deviation. Enclosure (3) includes the TBI reporting rules. Enclosure (4) lists the ICD-9 codes that are relevant to accurately reporting the severity of brain injury, as noted by ICD-9 codes 850.11 and 850.12. Enclosure (5) lists the V-Codes that categorize TBI as GWOT or non-GWOT related. While these V-Codes are not yet published in AHLTA and CHCS-1, they are pertinent to accurate brain injury classification for this new TBI reporting requirement.
4. Regional Commanders will submit monthly consolidated TBI reports, collated by military treatment facility, no later than the 7<sup>th</sup> of the month for the previous month's data, (e.g., 1-30 November for the December report). Regional Commanders will submit TBI reports to BUMED M3C3 via encrypted email. The BUMED M3C3 email address is [bumed.m3c3@med.navy.mil](mailto:bumed.m3c3@med.navy.mil). While this is short notice, Regional Commanders will provide the required December report no later than 20 December 2007. BUMED will then submit a consolidated Navy Medicine TBI report to the Defense and Veterans Brain Injury Center. The January 2008 report will be submitted by the required report date.

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5. My point of contact for this issue is CAPT Robert Koffman, BUMED, Director, Deployment Health (M3C3), Combat and Operational Stress Control Consultant, at (202) 762-3072 or robert.koffman@med.navy.mil.



T. R. CULLISON  
Vice Chief

**DoD DEFINITION OF TRAUMATIC BRAIN INJURY (TBI)**

A traumatically induced structural injury and/or physical disruption of brain function as a result of an external force that is indicated by new onset or worsening of at least one of the following clinical signs, immediately following the event:

- Any period of loss of or decreased level of consciousness;
- Any loss of memory for events immediately before or after the injury;
- Any alteration in mental state at the time of the injury (confusion, disorientation, slowed thinking, etc.);
- Neurological deficits (weakness, loss of balance, change in vision, praxis, paresis/plegia, sensory loss, aphasia, etc.) that may or may not be transient;
- Intracranial lesion.

External forces may include any of the following events: the head being struck by an object, the head striking an object, the brain undergoing an acceleration/deceleration movement without direct external trauma to the head, a foreign body penetrating the brain, forces generated from events such as a blast or explosion, or other force yet to be defined.

The above criteria define the event of a traumatic brain injury (TBI). Sequelae of TBI may resolve quickly, within minutes to hours after the neurological event, or they may persist longer. Some sequelae of TBI may be permanent. Most signs and symptoms will manifest immediately following the event. However, other signs and symptoms may be delayed from days to months (e.g., subdural hematoma, seizures, hydrocephalus, spasticity, etc.). Signs and symptoms may occur alone or in varying combinations and may result in a functional impairment. These signs and symptoms are not better explained by pre-existing condition or other medical, neurological, or psychological causes except in cases of an exacerbation of pre-existing condition. These generally fall into one or more of the three categories:

- Physical: Headache, nausea, vomiting, dizziness, blurred vision, sleep disturbance, weakness, paresis/plegia, sensory loss, spasticity, aphasia, dysphagia, dysarthria, apraxia, balance disorders, disorders of coordination, seizure disorder.

- Cognitive: Attention, concentration, memory, speed of processing, new learning, planning, reasoning, judgment, executive control, self-awareness, language, abstract thinking.
- Behavioral/emotional: Depression, anxiety, agitation, irritability, impulsivity, aggression.

Note: The signs and symptoms listed above are typical of each category but are not an exhaustive list of all possible signs and symptoms.

### **SEVERITY OF BRAIN INJURY STRATIFICATION:**

Not all individuals exposed to an external force will sustain a TBI. TBI varies in severity, traditionally described as mild, moderate and severe. These categories are based on measures of length of unconsciousness, post-traumatic amnesia.

The trauma may cause structural damage or may produce more subtle damage that manifests by altered brain function, without structural damage that can be detected by traditional imaging studies such as Magnetic Resonance Imaging or Computed Tomography scanning. In addition to traditional imaging studies, other imaging techniques such as functional magnetic resonance imaging, diffusion tensor imaging, positron emission tomography scanning, as well as electrophysiological testing such as electroencephalography may be used to detect damage to or physiological alteration of brain function. In addition, altered brain function may be manifest by altered performance on neuropsychological or other standardized testing of function.

Acute injury severity is determined at the time of the injury, but this severity level while having some prognostic value, does not necessarily reflect the patient's ultimate level of functioning. It is recognized that serial assessments of the patient's cognitive, emotional, behavioral and social functioning is required.

- The patient is classified as mild/moderate/severe if he or she meets any of the criteria below within a particular severity level. If a patient meets criteria in more than one category of severity, the higher severity level is assigned.

- If it is not clinically possible to determine the brain injury level of severity because of medical complications (e.g., medically induced coma), other severity markers are required to make a determination of the severity of the brain injury.

<b>Mild TBI</b>	<b>Moderate TBI</b>	<b>Sever TBI</b>
Normal structural imaging	Normal or abnormal structural imaging	Normal or abnormal structural imaging
LOC = 0-30 min	LOC >30 min and < 24 hours	LOC > 24 hours
AOC = a moment up to 24 hours	AOC > 24 hours. Severity based on other criteria.	
PTA = 0-1 day	PTA >1 and <7 days	PTA >7 days

AOC – alteration of consciousness/mental state  
 LOC – Loss of consciousness  
 PTA – Post-traumatic amnesia

\* An inconsistency currently exists between this published guidance and the published V codes for mild TBI when loss of consciousness is between 30 and 59 minutes. Until this inconsistency is resolved, Services are to report in the attached format using the criteria published above.

It is recognized that the cognitive symptoms associated with post-traumatic stress disorder (PTSD) may overlap with symptoms of mild TBI. Differential diagnosis of brain injury and PTSD is required for accurate diagnosis and treatment.

Navy Medicine  
Monthly TBI Tracking Report

12/4/2007

OIF/OEF Traumatic Brain Injury															
In characterizing severity of TBI, MTFs will report TBI according to the interim criteria published in the ASD(HA) TBI Definition and Reporting Memo, dated 01 Oct 2007. There will be no deviations or exceptions to this report format without prior authorization from BUMED.															
MTF/Site	Patient Name	Patient Age	Gender	Rank	Branch	Patient SSN	Where Wounded	Deployment	Closed TBI	Penetrating TBI	Injury Agent = Fragment	Injury Agent = Fall	Injury Agent = Bullet	Injury Agent = Blast	Injury Agent = Vehicular
MTF/Site	PT NAME	PT AGE	GENDER	RANK	BRANCH	PTSSN	WHERE	DEPLOY	HEAD_CL	HEAD_PEN	AGENT_FR	AGENT_FA	AGENT_BU	AGENT_BL	AGENT_V
NNMC	Smith, James D.	23	1	E4	USMC	987654321	1	2	1	0	0	0	0	1	0

Navy Medicine  
Monthly TBI Tracking Report

Injury Agent = Other	Date of Injury	Home of Record	Closed TBI Severity	Date of Admission, if applicable, OR Date of Assessment	Date of Discharge (if Applicable)	Outcome	V Code	ICD9 Code
Yes=1 No=0	mm/dd/yyyy	Postal Abbreviation (i.e. OH for Ohio)	Mild=1 (LOC 0-30 min). Mod=2 (LOC > 30 min and < 60 min). Severe=3 (LOC > 24 hours) Penetrating=97	mm/dd/yyyy	mm/dd/yyyy	1=Return to Duty 2=Limited Duty 3=Home 4=Home w/Outpt Support 5=Community Trans Pgmn 6=Nursing Home 7=Med Retirement 8=Pending Med Board		
AGENT _O	DT_INJ	HOME_REC	SEVERITY	DT_ADM	DT_DC	OUTCOME	V Code	ICD9 Code
0	02/21/07	NJ	1	02/24/07	03/25/07	2	V15.52	850.11

4 Dec 2007

### **TBI Reporting Database Rules**

1. Name
  - Last name first
  - First letters of first and last name uppercase, rest are lowercase.
  - Include middle initial if known.
  - Ex: Smith, Robert A.
2. Age
  - Numerical age
3. Gender
  - 1=Male 2=Female
4. Rank
  - No dashes
  - Ex: E2, O3
5. Branch
  - USA=Army Active Duty, USAR=Army Reserve, USNG=National Guard, USMC=Marine Corps Active Duty, USMCR=Marine Corps Reserve, USN=Navy Active Duty, USNR=Navy Reserve, USAF=Air Force Active Duty, USAFR=Air Force Reserve, CIV=Civilian
6. SSN
  - Only include the 9 digit SSN with no dashes.
  - Ex: 987654321
7. Where Wounded
  - 1=Operation Iraqi Freedom (OIF)
  - 2=Operation Enduring Freedom (OEF)
  - 3=Other than (OIF/OEF)
8. Deployment
  - Which OIF/OEF deployment was the patient on when injured? (e.g., OIF)
9. Closed TBI
  - 1=Yes 0=No
10. Penetrating TBI
  - A penetrating TBI is one in which the dura of the brain is punctured.
  - 1=Yes 0=No

Enclosure (3)



**Note:** Agent of injury is the cause of the TBI. For example, if a patient was shot in the leg, fell and hit his head, his agent of injury would be a fall but not a bullet.

11. Injury Agent=Fragment
  - 1=Yes 0=No
12. Injury Agent =Fall
  - 1=Yes 0=No
13. Injury Agent=Bullet
  - 1=Yes 0=No
14. Injury Agent=Blast
  - 1=Yes 0=No
15. Injury Agent=Vehicular
  - 1=Yes 0=No
16. Injury Agent=Other
  - 1=Yes 0=No
17. Date of Injury
  - mm/dd/yyyy
18. Home of Record
  - Use postal abbreviation for patient's home state.
19. Closed TBI Severity
  - 1=mild 2=moderate 3=severe 97=penetrating
20. Date of Admission (if applicable) / Outpatient Assessment
  - mm/dd/yyyy
21. Date of Discharge (if applicable) / NA to Outpatient Assessment
  - mm/dd/yyyy
  - **Unknown discharge dates will be collected at the end of the calendar year.**
22. Outcome / Discharge Disposition
  - 1=Return to Duty, 2=Limited Duty, 3=Home, 4=Home w/Outpt Support, 5=Community Transitional Program, 6=Nursing Home, 7=Med Retirement, 8=Pending Med Board
24. V-Code
25. ICD-9 Code


Enclosure (3)

**2007 ICD-9-CM Volume 1 Diagnosis Codes**  
**Intracranial Injury, Excluding Those With Skull Fracture 850-854 >**


 **ICD-9-CM Diagnosis 850**

**Concussion**


A nonspecific term used to describe transient alterations or loss of consciousness following closed head injuries. The duration of UNCONSCIOUSNESS generally lasts a few seconds, but may persist for several hours. Concussions may be classified as mild, intermediate, and severe. Prolonged periods of unconsciousness (often defined as greater than 6 hours in duration) may be referred to as post-traumatic coma (COMA, POST-HEAD INJURY). (From Rowland, Merritt's Textbook of Neurology, 9th ed, p418)  
850 is a non-specific code that cannot be used to specify a diagnosis

 **ICD-9-CM Diagnosis 850.0**


Concussion with no loss of consciousness  
850.0 is a specific code that can be used to specify a diagnosis  
850.0 contains 4 index entries

 **ICD-9-CM Diagnosis 850.1**

Concussion with brief loss of consciousness  
850.1 is a non-specific code that cannot be used to specify a diagnosis

 **ICD-9-CM Diagnosis 850.11**


Concussion with loss of consciousness of 30 minutes or less  
850.11 is a specific code that can be used to specify a diagnosis  
850.11 contains 2 index entries

 **ICD-9-CM Diagnosis 850.12**

Concussion with loss of consciousness from 31 to 59 minutes  
850.12 is a specific code that can be used to specify a diagnosis  
850.12 contains 2 index entries

 **ICD-9-CM Diagnosis 850.2**

Concussion with moderate loss of consciousness  
850.2 is a specific code that can be used to specify a diagnosis  
850.2 contains 2 index entries

 **ICD-9-CM Diagnosis 850.3**

Concussion with prolonged loss of consciousness and return to pre-existing conscious level  
850.3 is a specific code that can be used to specify a diagnosis  
850.3 contains 2 index entries


 **ICD-9-CM Diagnosis 850.4**

Concussion with prolonged loss of consciousness without return to pre-existing conscious level  
850.4 is a specific code that can be used to specify a diagnosis  
850.4 contains 2 index entries

Attachment (3)

 **ICD-9-CM Diagnosis 850.5**

Concussion with loss of consciousness of unspecified duration  
850.5 is a specific code that can be used to specify a diagnosis  
850.5 contains 3 index entries

 **ICD-9-CM Diagnosis 850.9**

**Concussion unspecified**

A nonspecific term used to describe transient alterations or loss of consciousness following closed head injuries. The duration of UNCONSCIOUSNESS generally lasts a few seconds, but may persist for several hours. Concussions may be classified as mild, intermediate, and severe. Prolonged periods of unconsciousness (often defined as greater than 6 hours in duration) may be referred to as post-traumatic coma (COMA, POST-HEAD INJURY). (From Rowland, Merritt's Textbook of Neurology, 9th ed, p418)  
850.9 is a specific code that can be used to specify a diagnosis  
850.9 contains 7 index entries

Enclosure (4)

Code Number	Exten der	Short Narrative	Long Narrative Additions
996.62	0	RXN, V ASCULAR DEVICE NOS	INFECTION AND INFLAMMATORY REACTION DUE TO VASCULAR DEVICE, IMPLANT, AND GRAFT, NOS
996.62	1	RXN, V ASCULAR DEVICE JUGULAR V	INFECTION AND INFLAMMATORY REACTION DUE TO VASCULAR DEVICE, IMPLANT, AND GRAFT, JUGULAR VEIN
996.62	2	RXN, V ASCULAR DEVICE SUBCLAVN V	INFECTION AND INFLAMMATORY REACTION DUE TO VASCULAR DEVICE, IMPLANT, AND GRAFT, SUBCLAVIAN VEIN
996.62	3	RXN, V ASCULAR DEVICE FEMORAL V	INFECTION AND INFLAMMATORY REACTION DUE TO VASCULAR DEVICE, IMPLANT, AND GRAFT, FEMORAL VEIN
996.62	4	RXN, V ASCULAR DEVICE OTHER VEIN	INFECTION AND INFLAMMATORY REACTION DUE TO VASCULAR DEVICE, IMPLANT, AND GRAFT, OTHER SPECIFIED VEIN
996.62	5	RXN, V ASCULAR DEVICE VEIN NOS	INFECTION AND INFLAMMATORY REACTION DUE TO VASCULAR DEVICE, IMPLANT, AND GRAFT, VEIN NOS
V15.5	0	PERSONAL HX, INIURY, HLTH HAZARD	OTHER PERSONAL HISTORY PRESENTING HAZARDS TO HEALTH, OTHER
V15.5	1	TBI, PERSONAL HX, GWOT, UKN LEVEL	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), GLOBAL WAR ON TERRORISM (GWOT) RELATED, UNKNOWN LEVEL OF SEVERITY
V15.5	2	TBI, PERSONAL HX, GWOT, MILD	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), GLOBAL WAR ON TERRORISM (GWOT) RELATED, HIGHEST LEVEL OF SEVERITY MILD (GLASGOW COMA SCALE 13-15), LOC < 1HR, POST TRAUMA, AMNESIA < 24HR
V15.5	3	TBI, PERSONAL HX, GWOT, MODERATE	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), GLOBAL WAR ON TERRORISM (GWOT) RELATED, HIGHEST LEVEL OF SEVERITY MODERATE (GLASGOW COMA SCALE 9-12), LOC 1-24 HRS, POST TRAUMA, AMNESIA 1-6 DAYS
V15.5	4	TBI, PERSONAL HX, GWOT, SEVERE	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), GLOBAL WAR ON TERRORISM (GWOT) RELATED, HIGHEST LEVEL OF SEVERITY SEVERE (GLASGOW COMA SCALE 3-8), LOC > 24HRS, POST TRAUMA, AMNESIA > 6 DAYS
V15.5	5	TBI, PERSONAL HX, GWOT, PENETRATG	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), GLOBAL WAR ON TERRORISM (GWOT) RELATED, PENETRATING INTRACRANIAL WOUND (NO LEVEL OF SEVERITY ASSIGNED)
V15.5	6	TBI, PERSONAL HX, NON-GWOT, UKN	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), NOT GWOT RELATED, UNKNOWN LEVEL OF SEVERITY
V15.5	7	TBI, PERSONAL HX, NON-GWOT, MILD	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), NOT RELATED TO GLOBAL WAR ON TERRORISM (GWOT), HIGHEST LEVEL OF SEVERITY MILD (GLASGOW COMA SCALE 13-15), LOC < 1HR, POST TRAUMA, AMNESIA < 24HR
V15.5	8	TBI, PERSONAL HX, NON-GWOT, MODER	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), NOT RELATED TO GLOBAL WAR ON TERRORISM (GWOT), HIGHEST LEVEL OF SEVERITY MODERATE (GLASGOW COMA SCALE 9-12), LOC 1-24 HRS, POST TRAUMA, AMNESIA 1-6 DAYS
V15.5	9	TBI, PERSONAL HX, NON-GWOT, SEVER	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), NOT RELATED TO GLOBAL WAR ON TERRORISM (GWOT), HIGHEST LEVEL OF SEVERITY SEVERE (GLASGOW COMA SCALE 3-8), LOC > 24HRS, POST TRAUMA, AMNESIA > 6 DAYS
V15.5	A	TBI, PERSONAL HX, NON-GWOT, PENET	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), NOT RELATED TO GLOBAL WAR ON TERRORISM (GWOT), PENETRATING INTRACRANIAL WOUND (NO LEVEL OF SEVERITY ASSIGNED)

Code Number	Extender	Short Narrative	Long Narrative Additions
V15.5	B	TBI,PERSON HX, UKN IF GWOT,UKN	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), UNKNOWN IF GWOT RELATED, UNKNOWN SEVERITY LEVEL
V15.5	C	TBI,PERSON HX, UKN IF GWOT, MILD	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), UNKNOWN IF RELATED TO GLOBAL WAR ON TERRORISM (GWOT), HIGHEST LEVEL OF SEVERITY MILD (GLASGOW COMA SCALE 13-15), LOC < 1HR, POST TRAUMA AMNESIA < 24HR
V15.5	D	TBI,PERSON HX, UKN IF GWOT, MODE	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), UNKNOWN IF RELATED TO GLOBAL WAR ON TERRORISM (GWOT), HIGHEST LEVEL OF SEVERITY MODERATE (GLASGOW COMA SCALE 9-12), LOC 1-24 HRS, POST TRAUMA AMNESIA 1-6 DAYS
V15.5	E	TBI,PERSON HX, UKN IF GWOT, SEVE	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), UNKNOWN IF RELATED TO GLOBAL WAR ON TERRORISM (GWOT), HIGHEST LEVEL OF SEVERITY SEVERE (GLASGOW COMA SCALE 3-8), LOC > 24HRS, POST TRAUMA AMNESIA > 6 DAYS
V15.5	F	TBI,PERSON HX, UNK IF GWOT, PENE	PERSONAL HISTORY OF TRAUMATIC BRAIN INJURY (TBI), UNKNOWN IF RELATED TO GLOBAL WAR ON TERRORISM (GWOT), PENETRATING INTRACRANIAL WOUND (NO LEVEL OF SEVERITY ASSIGNED)
V49.89	0	OTHER SPECIFIED HEALTH IMPACT	OTHER SPECIFIED CONDITIONS INFLUENCING HEALTH STATUS OTHER
V49.89	1	OTHER HLTH IMPACT, NOT CASE MGT	OTHER SPECIFIED CONDITION, NOT CASE MANAGEMENT
V49.89	2	CASE MANAGEMENT START	CASE MANAGEMENT START
V49.89	3	CASE MANAGEMENT CONTINUE	CASE MANAGEMENT CONTINUE
V49.89	4	CASE MANAGEMENT END	CASE MANAGEMENT END
V49.89	9	CASE MANAGEMENT, NEC AND NOS	CASE MANAGEMENT, OTHER AND UNSPECIFIED