THE ASSISTANT SECRETARY OF DEFENSE
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HEALTH AFFAIRS

OCT 1 2007

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (M&RA)
ASSISTANT SECRETARY OF THE NAVY (M&RA)
ASSISTANT SECRETARY OF THE AIR FORCE (M&RA)

SUBJECT: Traumatic Brain Injury: Definition and Reporting

Reference: (a) Health Affairs Memorandum, "Consolidation of Traumatic Brain Injury Initiatives in the Department of Defense," dated March 23, 2007

Traumatic brain injury (TBI), whether mild, moderate, severe, or penetrating, is a significant health concern for the Department of Defense (DoD). To ensure a common understanding—as well as to design coordinated, coherent, high quality, and patient-centered programs—we must properly identify, document, and report those Service members who have suffered a TBI.

This memorandum establishes a common definition of TBI, severity of brain injury stratification, and method of data collection. These measures represent a major step toward unified TBI diagnosis and will lead to the advancement of therapeutic methods.

Services will identify TBI cases using the DoD definition of TBI (Attachment 1). Until automated mechanisms are established, Services will report all identified cases of TBI in accordance with Attachment 2. This requirement will become effective 60 days from the date of this memorandum. The Defense and Veterans Brain Injury Center (DVBIC) is designated as the single office of responsibility for the consolidation of all TBI-related incidence and prevalence information for DoD. The DVBIC will forward a monthly report (inclusive of Protected Health Information) to the office of the Deputy Assistant Secretary of Defense for Force Health Protection and Readiness.

The DoD's management of Service members with TBI is evolving rapidly. Definition and reporting are the foundation upon which this program must be based. Services can anticipate incremental policies and guidance addressing other components

of TBI management such as training, coding (International Classification of Diseases-9), evaluation and treatment. These efforts will culminate in a new DoD Center of Excellence for TBI and Psychological Health.

S. Ward Casscells, MD

Attachments:
As stated

cc:
Surgeon General of the Army
Surgeon General of the Navy
Surgeon General of the Air Force
Medical Officer of the Marine Corps
Joint Staff Surgeon
Defense Health Board

DEFINITION OF TRAUMATIC BRAIN INJURY

A traumatically induced structural injury and/or physiological 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 a 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 conditions or other medical, neurological, or psychological causes except in cases of an exacerbation of a pre-existing condition. These generally fall into one or more of the three following 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.

Mild	Moderate	Severe
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 hrs
AOC = a moment up to 24 hrs	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.

REPORTING TRAUMATIC BRAIN INJURY

Using the definition and severity criteria in Appendix 1, all Services will submit a monthly report to the Office of Clinical Standards, Defense and Veterans Brain Injury Center (DVBIC). My point of contact is Ms. Athena Kendall-Robbins, *athena.kendall@amedd.army.mil*, (202) 782-3102. Reports must be forwarded by the 15th of the month with the "as of" date being the 1st of the month. Reports should be submitted electronically via encrypted e-mail using the following format:

Patient Name	Patient Age	Gender	Rank	Branch	Patient SSN	Where Wounded	Deployment
Last, First MI	Number	1=Male, 2=Female	(pay scale)	USA, USAR, ARNG, etc.	9 digits no dashes or spaces	1=OIF, 2=OEF, 3=other than OIF/OEF	If deployed, which OIF/OEF deployment is this? 1, 2, 3 etc.
Smith, James D.	23	1	E4	USMC	987654321	1	2

Closed TBI	Penetrating TBI	Injury Agent = Fragment	Injury Agent = Fall	Injury Agent = Bullet	Injury Agent = Blast	Injury Agent = Vehicular	Injury Agent = Other
Yes=1 No=0	Yes=1 No=0	Yes=1 No=0	Yes=1 No=0	Yes=1 No=0	Yes=1 No=0	Yes=1 No=0	Yes=1 No=0
1	0	0	0	0	1	0	0

Date of Injury	Home of Record	Closed TBI Severity	Date of Admission (if applicable)	Date of Discharge (if applicable)	Outcome (if known)	V Code	ICD9 Code
mm/dd/yyyy	Postal Code (e.g. OH for Ohio)	Mild=1 Mod=2 Severe=3 Penetrating=97	mm/dd/yyyy	mm/dd/yyyy	1=Return to Duty 2=Limited Duty 3=Home 4=Home w/Outpnt Support 5=Community Trans Pgrm 6=Nursing Home 7=Med Retirement 8=Pending Med Board		
2/21/2007	NJ	1	2/24/2007	3/25/2007	2	V15.52	850.11

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, ARNG=Army National Guard, USAR=Army Reserve, USMC=Marine Corps Active Duty, USMCR=Marine Corps Reserve, USN=Navy Active Duty, USNR=Navy Reserve, USAF=Air Force Active Duty, ANG=Air National Guard, 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 OEF/OIF

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 duramater of the brain is punctured.
   - 1=Yes
   - 0=No

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 gunshot wound.

11. Injury Agent=Fragment:

   - 1=Yes
   - 0=No

12. Injury Agent=Fall:

   - 1=Yes
   - 0=No

13. Injury Agent=Gunshot wound:

- 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:

- Mailing Address
- Use postal code for patient's home state.

19. Closed TBI Severity:

- 1=mild
- 2=moderate
- 3=severe
- 97=penetrating

20. Date of Admission (if applicable):

- mm/dd/yyyy

21. Date of Discharge (if applicable):

- mm/dd/yyyy
- Unknown discharge dates will be collected at the end of the calendar year.

22. Discharge Disposition:

- 1=Return to Duty 2=Limited Duty 3=Home 4=Home w/Outpnt Support 5=Community Transitional Program 6=Nursing Home 7=Med Retirement 8=Pending Med Board
- Unknown variables will be collected at the end of the calendar year.

23. V Code

24. International Code of Diseases—9 Codes

Clinical Management Guidance for Mild Traumatic Brain Injury – Acute Non-Deployed Care

TRAUMATIC EVENT
~Concussion Suspected~

1. Perform MACE
2. Confirm mTBI:
   a. ***Injury Event*** *(**blast, fall, motor vehicle collision (MVC), head impact**)*
   AND
   b. ***Alteration of Consciousness*** *(**dazed, confused or loss of consciousness even momentarily**)*

Evaluate for Red Flags[a]
Perform Neuro Exam
CT Scan
Administer ANAM[b]

Are Red Flags[a] present or is CT Scan positive?

Yes → ***Urgent referral to Neurology, Neurosurgery, or Emergency Room as appropriate***

No

Positive findings on Neuro Exam, ANAM[b], or MACE Score <25 or symptoms from Item VIII?

Yes →
Primary Care Management
1. Manage symptoms[c]
2. Provide Education
3. Profile – 7 days
4. Re-evaluate symptoms (Item VIII) and re-administer ANAM[b] within 7 days
5. Consider Neurology referral if clinically indicated

Continued symptoms or abnormal ANAM on re-evaluation?

Yes →
1. 30 day profile
2. Go to Sub-Acute CMG

No

Perform Exertional Testing[d]

Positive symptoms with exertional exercise testing[d]?

Yes →
1. Provide Education
2. Profile – 7 days
3. Repeat exertional testing[d] in 24 hours

Positive symptoms on exertional testing[d]

Yes → Repeat exertional testing[d] & re-evaluate symptoms in 7 days

Any new or persistent Symptoms with exertion?

Yes → (to Sub-Acute CMG)

No → Reinforce Education
Return to Duty

No → Reinforce Education
Return to Duty

No →
Provide Education
Instruct to seek f/u if symptoms develop in 1-2 days
Return to Duty

[a] **Red Flags:**
1. Progressively declining level of consciousness
2. Progressively declining neurological exam
3. Pupillary asymmetry
4. Seizures
5. Repeated vomiting
6. Double vision
7. Worsening headache
8. Cannot recognize people or disoriented to place
9. Behaves unusually or seems confused and irritable
10. Slurred speech
11. Unsteady on feet
12. Weakness or numbness in arms / legs

[b] **Administer ANAM:** If injury is over 24 hours old and if ANAM is available.

[c] **Treatment:**
1. Give educational sheet to all mTBI patients.
2. Headache management - use Acetominophen.
3. Avoid tramadol, narcotics, NSAID's, ASA, or other platelet inhibitors until CT confirmed negative.

[d] **Exertional Testing Protocol**
1. 65-85% Target Heart Rate (THR = 220-age)
   -using push-up, step aerobic, treadmill, hand crank
2. Assess for symptoms (headache, vertigo, photophobia, balance, dizziness, nausea, tinnitis, visual changes, response to bright light or loud noise)

ICD-9 Codes
850.0 concussion w/o LOC
850.11 Concussion w/ LOC <30 min
850.12 Concussion w/ LOC 31-59 min
E979.2 Injury from terrorist explosion blast

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Clinical Management Guideline Mild Traumatic Brain Injury – Sub-Acute

Possible Sub-Acute mTBI (over 7 days post trauma)

High Risk Group:
1. Injury caused by explosion
2. Injury from fall, MVC, GSW above shoulders

Evaluation:
1. Administer Symptom and History Questionnaire – ***Pg. 3***
2. Record history – previous trauma / current exposure
3. Perform Neuro Exam
4. Administer ANAM[a]
5. Identify Symptom Cluster(s) *[Headache, Balance, Sleep, Irritability, Memory]* – ***Pg. 2***
6. Perform additional Symptom Cluster assessments as indicated– ***Pg. 2***

mTBI Disposition Decision

	Symptomatic	Disabling Symptoms
Resolving / Responding	**Retain**	**1. Gather collateral information: ANAM, time in service, unit & family feedback** **2. Ensure sufficient trial of OT/PT Rehab** **3. Consider MEB – 12 months**
No Change		**1. Consider MEB – 6 months with collateral information** **2. Initiate MEB – NLT 12 months**
Worsening		

Are Red Flags[b] Present? — Yes
1. Urgent CT Scan
2. Referral (as indicated by symptom cluster)
3. Provide Education

No

Confirmed mTBI?[c] — Yes
CT Scan Indicated[d]? — Yes
Order CT Scan
Positive CT Scan? — Yes
1. Neurology Referral (24 hr)
2. Provide Education

Positive CT Scan? — No
Symptomatic? — Yes
1. Manage symptom cluster– ***Pg. 2***
2. Provide Education
3. Profile – up to 3 months
3. Periodic re-evaluation (e.g., every 3 months)
4. Determine final disposition at 12 months or sooner

Confirmed mTBI?[c] — No
CT Scan Indicated[d]? — No
Symptomatic? — No
1. Provide Education
2. RTD

[a] If ANAM is available

[b] **Red Flags:**
1. Progressively declining level of consciousness
2. Progressive declining neurological exam
3. Pupillary asymmetry
4. Seizures
5. Repeated vomiting
6. Double vision
7. Worsening headache
8. Cannot recognize people or disoriented to place
9. Behaves unusually or seems confused and irritable
10. Slurred speech
11. Unsteady on feet
12. Weakness or numbness in arms / legs

ICD-9 Codes
850.0 concussion w/o LOC
850.11 Concussion w/ LOC <30 min
850.12 Concussion w/ LOC 31-59 min
E979.2 Injury from terrorist explosion blast

[c] **Confirm mTBI:**
1. ***Injury Event*** *(blast, fall, MVC, head impact)* AND
2. ***Alteration of Consciousness*** *(dazed, confused or loss of consciousness even momentarily)*

[d] **CT Scan Criteria:** CT Scan is indicated in mTBI patients with headache, vomiting, drug or alcohol intoxication, deficits in short term memory, physical evidence of trauma above the clavicle, dizziness, disequilibrium, or age >60.

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Symptom Cluster	***Presenting Symptoms or Complaints – Assess frequency, severity, aggrevating factors***	***Special Assessments by Symptom Cluster***	***Assessment Red Flags***	***Treatments by Symptom Cluster*** ***(NOTE: Treat headache, irritability, and sleep first followed by memory. A majority of patients improve on memory with treatment of headache, irritability, and sleep alone).***
Headache	Headache, sensitivity to bright light or loud noise, nausea, tinnitus, vision problems	**Examine**: fundascopic, pupils, visual acuity, extraocular, cerebellar/ coordination (e.g., finger to nose, rapid alternating movements), deep tendon reflexes (DTRs), gait, motor/sensory, trigger points (neck, greater occipital nerve) **REFER:** Any abnormality – 24 hours referral to Neurology ***•ALL dosing and medications listed in this table are suggestions.*** ***•Inclusion in this guidance does NOT imply an FDA approved indication.*** ***•See full prescribing information for details of medication indications, contra-indications, dosing, side-effects, and cautions.***	Worse/ worsening / uncontrolled headache, fever, stiff neck, blackout, seizures **REFER:** Urgent referral to Neurology	**Symptomatic Treatment** (prn at HA onset, up to 3 days/week): Motrin 600-800 mg,; Naprosyn; Fiorinal/Fioricet; Triptans **Avoid:** Narcotics, Tylenol, Excedrin, Fioricet in patients with daily headache due to the risk of rebound headache. **Preventive Treatment*:** *(guided by **comorbid** conditions):* **Insomnia:** tri-cyclic anti-depressants, e.g., Amitryptiline (Elavil) or Nortryptiline (Pamelor) – 10-25 mg QHS starting and increasing every 1-2 weeks prn up to 50-75 mg. ***~OR~*** **Hypertension**: consider Propanolol (Inderal) - 60 mg q day up to 180 mg q day or other beta blocker. ***~OR~*** **Neuropathic Pain:** consider Gabapentin (Neurontin): 300 mg BID up to 900 mg TID. **Regardless of selection of preventive therapy, should have trial of treatment of 4-6 weeks before considered ineffective.* **REFER** to Neurology if patient fails trial of two preventive treatments.
Balance	Balance, dizziness, coordination problems, ringing in the ears	**Examine:** ***Dix-Hallpike Maneuver, Romberg,*** nystagmus, positional / postural balance, cerebellar/ coordination (e.g., finger to nose, rapid alternating movements), ENT – otoscopic exam, bedside hearing test, review audiogram if available. **REFER:** Any abnormality – 24 hours referral to Neurology	Lateral abnormality, nystagmus **REFER:** Urgent referral to Neurology	**REFER** to Physical Therapy
Sleep	Fatigue (physical and/or mental), sleeplessness, sleep disturbances, nightmares, sleep walking	Administer: ***Epworth Sleepiness Scale*** **History / Symptom questions**: difficulty falling asleep, difficulty staying asleep, acting out in sleep (sleep walking), nightmares, falling out of bed, confusion, frightened arousal, non-restorative sleep, alcohol or other substance abuse. **Examine:** neck size, airway	Apnea **REFER:** Urgent referral to Neurology, Pulmonary Medicine, or other Sleep Lab.	**First Choice** – without other associated symptoms: 7-14 day trial of Trazodone (Desyrel) 25 - 100 mg qHS (response should be seen within 1-14 days); Ambien 5-10mg QHS prn - **LIMIT** therapy to 2 weeks. **Comorbid Conditions**: **Nightmares or other PTSD-related symptoms**: trial of Quetiapine (Seroquel) – dosage starting at 25 mg q hs tapered up to 100 mg over a period of one week (increase every 2 days if no improvement seen up to 100 mg; stabilize at 100 mg for one week before considering ineffective); **Headaches:** trial of Amitriptyline (Elavil) starting at 10 mg q hs and titrated up to doses of 75 – 100 mg if needed, complete trial of 6-8 weeks before considering ineffective. **REFER** to psychiatry if medication trials are ineffective.
Irritability	Anger, depression, anxiety, mood swings	**Administer:**, ***PCL-M Screening questionnaire*** **Specific history / symptom questions:** physical fighting, alcohol intake, relationship problems, suicidal, homicidal **REFER**: PCL-M Score over 50 – 24 hours referral to Psychiatry, Psychology, Social Work	Outward violence (not just arguing), physical fighting, alcohol intake, relationship problems, suicidal ideation, homicidal ideation, significant decline in function. **REFER:** Urgent referral to Psychiatry, Psychology, Social Work	6 week trial of SSRI / SNRI: **SSRI considerations:** Sertraline (Zoloft) 25 - 150 mg po q day; Citalopram (Celexa) 10-40 mg po q day; or Escitalopram (Lexapro) 10-40 mg po q day. **SNRI considerations:** Venlafaxine (Effexor XR) – start 37.5 mg q day and titrate by 37.5 mg/week up to 150 mg q day. **REFER** to Psychiatry if does not respond after 6 week trial.
Memory	Memory loss or lapses, decreased concentration, forgetting.	**Administer:** ***ANAM*** **Gather: Info** from other sources (collateral information) – including family members and supervisor feedback.		**Normalize:** Sleep and Diet/Nutrition **REFER** to Occupational Therapy and Speech/Language Therapy (if available) for cognitive therapy **REFER** to Neuropsychology if there are no other symptoms or after intial treatment of symptom clusters above.

Initial History and Symptoms Questionnaire

1. During the past four years, have you had any injuries from any of the following:

(Mark all that apply)

- O Blast or Explosion
- O Bullet wound (above shoulders)
- O Fragment wound (above shoulders
- O Vehicle accident
- O Sports accident
- O Fall
- O Fight
- O Other blow to the head

2. Did you experience any of the following?

(Mark all that apply)

- O Being dazed, confused, saw stars
- O Knocked out – less than 1 minute
- O Knocked out – 1 - 20 minutes
- O Knocked out – more than 20 minutes
- O Did not remember the injury
- O Bleeding from the ears
- O Head injury
- O Concussion symptoms
- O None of the above

3. Do you have or have you had any of the following symptoms from the injuries?

(Mark all that apply)

Right after injury	*Now at rest*	*Now with exertion*	
O	O	O	Headaches
O	O	O	Nausea / Vomiting
O	O	O	Sensitivity to bright light or noise
O	O	O	Balance problems / dizziness
O	O	O	Ringing in the ears
O	O	O	Sleep problems
O	O	O	Irritability (short temper)
O	O	O	Memory problems / lapses

Please rate the following symptoms with regard to how much they have disturbed you IN THE LAST 2 Weeks.
0 = None – Rarely if ever present; not a problem at all
1 = Mild – Occasionally present, but it does not disrupt my activities; I can usually continue what I'm doing; doesn't really concern me .
2 = Moderate – Often present, occasionally disrupts my activities; I can usually continue what I'm doing with some effort; I feel somewhat concerned.
3 = Severe – Frequently present and disrupts activities; I can only do things that are fairly simple or take little effort; I feel I need help.
4 = Very Severe – Almost always present and I have been unable to perform at work, school or home due to this problem; I probably cannot function without help.

Symptoms	**0**	**1**	**2**	**3**	**4**
Feeling Dizzy	O	O	O	O	O
Loss of balance	O	O	O	O	O
Poor coordination, clumsy	O	O	O	O	O
Headaches	O	O	O	O	O
Nausea	O	O	O	O	O
Vision problems, blurring, trouble seeing	O	O	O	O	O
Sensitivity to light	O	O	O	O	O
Hearing difficulty	O	O	O	O	O
Sensitivity to noise	O	O	O	O	O
Numbness or tingling on parts of my body	O	O	O	O	O
Change in taste and/or smell	O	O	O	O	O

Symptoms	**0**	**1**	**2**	**3**	**4**
Loss of appetite or increased appetite	O	O	O	O	O
Poor concentration, can't pay attention, easily distracted	O	O	O	O	O
Forgetfulness, can't remember things	O	O	O	O	O
Difficulty making decisions	O	O	O	O	O
Slowed thinking, difficulty getting organized, can't finish things	O	O	O	O	O
Fatigue, loss of energy, getting tired easily	O	O	O	O	O
Difficulty falling or staying asleep	O	O	O	O	O
Feeling anxious or tense	O	O	O	O	O
Feeling depressed or sad	O	O	O	O	O
Irritability, easily annoyed	O	O	O	O	O
Poor frustration tolerance, feeling easily overwhelmed by things	O	O	O	O	O

Used with permission: Cicerone,KD: J Head Tr Rehabil 1995;10(3):1-17

Epworth Sleepiness Scale

How likely are you to doze off or fall asleep in the situations described below, in contrast to feeling just tired? This refers to your usual way of life in recent times. Even if you haven't done some of these things recently try to work out how they would have affected you.

Score the chance that you would doze off in the following situations based on the scale:

0 = *would never doze* **1 = *Slight chance of dozing*** **2 = *Moderate chance of dozing*** **3 = *High chance of dozing***

Situation	**Chance of dozing**
Sitting and reading	
Watching TV	
Sitting, inactive in a public place (e.g. a theatre or a meeting)	
As a passenger in a car for an hour without a break	
Lying down to rest in the afternoon when circumstances permit	
Sitting and talking to someone	
Sitting quietly after a lunch without alcohol	
In a car, while stopped for a few minutes in the traffic	

Scoring:
0-10 Normal range
10-12 Borderline
12-24 Abnormal

PCL-M – Military Version

Instructions: Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, fill in the circle to indicate how much you have been bothered by that problem in the last month.

1 = Not at all ***2 = A little bit*** ***3 = Moderately*** ***4 = Quite a bit*** ***5 = Extremely***

No.	Response:	1	2	3	4	5
1.	Repeated, disturbing memories, thoughts, or images of a stressful military experience?	O	O	O	O	O
2.	Repeated, disturbing dreams of a stressful military experience?	O	O	O	O	O
3.	Suddenly acting or feeling as if a stressful military experience were happening again (as if you were reliving it)?	O	O	O	O	O
4.	Feeling very upset when something reminded you of a stressful military experience?	O	O	O	O	O
5.	Having physical reactions (e.g., heart pounding, trouble berating, or sweating) when something reminded you of a stressful military experience?	O	O	O	O	O
6.	Avoid thinking about or talking about a stressful military experience or avoid having feelings related to it?	O	O	O	O	O
7.	Avoid activities or situations because they remind you of a stressful military experience?	O	O	O	O	O
8.	Trouble remembering important parts of a stressful military experience?	O	O	O	O	O
9.	Loss of interest in things that you used to enjoy?	O	O	O	O	O
10.	Feeling distant or cut off from other people?	O	O	O	O	O
11.	Feeling emotionally numb or being unable to have loving feelings for those close to you?	O	O	O	O	O
12.	Feeling as if your future will somehow be cut short?	O	O	O	O	O
13.	Trouble falling or staying asleep?	O	O	O	O	O
14.	Feeling irritable or having angry outbursts?	O	O	O	O	O
15.	Having difficulty concentrating?	O	O	O	O	O
16.	Being “super alert” or watchful on guard?	O	O	O	O	O
17.	Feeling jumpy or easily startled?	O	O	O	O	O