



DEPUTY SECRETARY OF DEFENSE
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WASHINGTON, DC 20301-1010

JUN 21 2010

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DEPUTY CHIEF MANAGEMENT OFFICER
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
DIRECTOR, COST ASSESSMENT AND PROGRAM
EVALUATION
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, NET ASSESSMENT
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Directive-Type Memorandum (DTM) 09-033, "Policy Guidance for Management of Concussion/Mild Traumatic Brain Injury in the Deployed Setting"

- References:
- (a) DoD Directive 5124.02, "Under Secretary of Defense for Personnel and Readiness (USD(P&R))," June 23, 2008
 - (b) DoD Directive 5400.11, "DoD Privacy Program," May 8, 2007
 - (c) DoD Directive 5400.11-R, "DoD Privacy Program," May 14, 2007
 - (d) DoD 6025.18-R, "DoD Health Information Privacy Regulation," January 24, 2006
 - (e) DoD 8910.1-M, "DoD Procedures for Management of Information Requirements," June 30, 1998
 - (f) DoD Directive 6025.21E, "Medical Research for Prevention, Mitigation and Treatment of Blast Injuries," July 5, 2006

Purpose. This DTM:

- In accordance with the authority in Reference (a), establishes policy, assigns responsibilities, and provides procedures on the medical management of mild traumatic brain injury, otherwise known as concussion, in the deployed setting for all leaders within the Department of Defense, Service members, and medical personnel engaged in ongoing DoD missions. See Glossary for definition of "concussion."



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- Standardizes terminology, procedures, leadership actions, and medical management to provide maximum protection of those Service members.
- Is effective immediately; it shall be converted to a new DoD Instruction within 180 days.

Applicability. This DTM applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the Department of Defense (hereafter referred to collectively as the “DoD Components”).

Definitions. See Glossary.

Policy. It is DoD policy that:

- The Department of Defense shall identify, track, and ensure the appropriate protection of Service members exposed to potential concussive events, including blast events, to the maximum extent possible.
- Leaders in the Department of Defense shall direct a medical evaluation for any Service member exposed to possible concussive events.
- Leaders in the Department of Defense shall identify, treat, and manage concussion in Service members by following approved clinical guidance.
- Recurrent concussion shall be addressed in a manner appropriate to its emerging clinical significance.
- All individually identifiable information will be protected in accordance with DoD Directive (DoDD) 5400.11, DoDD 5400.11-R, and DoD 6025.18-R (References (b), (c), and (d), respectively).

Responsibilities. See Attachment 1.

Procedures. Procedures following potential concussive events for leaders are located in Attachment 2. The revised Concussion Clinical Guideline Algorithms are located in Attachment 3.

Information Requirements. The reporting requirements in sections 2 and 3 of Attachment 2 have been assigned Report Control Symbol (RCS) DD-HA(AR)2404 in accordance with DoD 8910.1-M (Reference (e)).

Releasability. RESTRICTED. This DTM is approved for restricted release through controlled Internet access from the DoD Issuances Website on the SECRET Internet Protocol Router Network at /www.dtic.smil.mil/whs/directives.

A handwritten signature in black ink, appearing to read "William J. Lynn III". The signature is fluid and cursive, with a prominent initial "W" and a long, sweeping tail.

William J. Lynn III

Attachments:
As stated

ATTACHMENT 1
RESPONSIBILITIES

1. UNDER SECRETARY OF DEFENSE FOR PERSONNEL AND READINESS (USD(P&R)). The USD(P&R) shall establish concussion management policy for the Department of Defense.

2. ASSISTANT SECRETARY OF DEFENSE FOR HEALTH AFFAIRS (ASD(HA)). The ASD(HA), under the authority, direction, and control of the USD(P&R), shall:

a. Advise the USD(P&R) on the physical and medical aspects of operationally relevant concussion training standards.

b. Oversee the implementation of this DTM, identify the capability gaps of current technologies and programs and, through the Defense Health Program (DHP) research, development, testing and evaluation program, budget and execute the development and fielding of new technologies and programs to support DoD concussion policy.

c. Recommend modifications to this DTM based upon reporting summaries received from the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE).

d. Develop a medical quality assurance program and metrics to monitor the effective implementation of this DTM.

e. Oversee the Director, DCoE, in the implementation of DCoE procedures to:

(1) Coordinate data analysis and promote data sharing with the Director, Defense Research and Engineering (DDR&E), the Director of the Joint Improvised Explosive Device Defeat Organization (JIEDDO), and the Secretary of the Army in his or her capacity as DoD Executive Agent (EA) for Medical Research for Prevention, Mitigation and Treatment of Blast Injuries (see DoDD 6025.21E (Reference (f))).

(2) Conduct comprehensive, retrospective analyses of relevant event-triggered concussion data and activities of the Services and combatant commanders and coordinate blast-specific data analyses with the DoD EA's Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC) program office.

(3) Develop event-specific monitoring summaries in coordination with the Services and Commanders of the Combatant Commands based on established procedures for updates to ASD(HA).

(4) Review and analyze concussion clinical algorithms to provide updates, as indicated.

3. ASSISTANT SECRETARY OF DEFENSE FOR RESERVE AFFAIRS (ASD(RA)).

The ASD(RA), under the authority, direction, and control of the USD(P&R), shall ensure the development of operationally relevant concussion training standards for Reserve Component members that are consistent with the policies established for the Active Components.

4. SECRETARIES OF THE MILITARY DEPARTMENTS. The Secretaries of the Military Departments shall:

- a. Promulgate Service policies consistent with this DTM and recommend suggested changes to the ASD(HA).
- b. Program and budget for necessary resources to implement this DTM.
- c. Require the development and implementation of an effective training plan by commanders for line leadership and Service members with regard to early detection of potential concussive events.
- d. Require the development and implementation of, and effective training plan for, medical assets pertaining to concussion clinical algorithms in accordance with Service-specific policy.
- e. Make resources available to support the training plans.
- f. Develop Service reporting guidelines for potential concussive events in accordance with section 3 of Attachment 2.
- g. Submit monthly tracking reports to the JTAPIC program office for Service members in accordance with section 3 of Attachment 2.
- h. Support medical and event tracking activities and follow-up medical care for Service members.

5. CHAIRMAN OF THE JOINT CHIEFS OF STAFF. The Chairman of the Joint Chiefs of Staff shall:

- a. Incorporate this DTM into relevant joint doctrine, training, and plans, as appropriate.
- b. In consultation with the Commanders of the Combatant Commands and the Secretaries of the Military Departments, monitor the implementation of this DTM.
- c. Monitor compliance with the requirements for documented tracking and reporting of Service members involved in a potential concussive event.

6. COMMANDERS OF THE COMBATANT COMMANDS. The Commanders of the Combatant Commands, through the Chairman of the Joint Chiefs of Staff, shall:

- a. Develop Combatant Command-specific procedures for Service component reporting of potential concussive events and support training programs for leaders on event-triggered screening guidelines.
- b. Submit monthly tracking reports to the JTAPIC program office for Service members in accordance with section 3 of Attachment 2.
- c. Monitor Service component compliance of monthly reporting requirements and quality management.

ATTACHMENT 2

PROCEDURES

1. (FOUO) MANDATORY EVENTS. Events requiring mandatory command evaluations and reporting of exposure of all involved personnel include, but are not limited to:

- a. (FOUO) Any Service member in a vehicle associated with a blast event, collision, or rollover.
- b. (FOUO) Any Service member within 50 meters of a blast (inside or outside).
- c. (FOUO) A direct blow to the head or witnessed loss of consciousness.
- d. (FOUO) Command-directed, especially in a case with exposure to multiple blast events.

2. (FOUO) SERVICE MEMBER ASSESSMENT. Commanders or their representatives are required to assess all Service members involved in a mandatory event, including those without apparent injuries, as soon as possible using the Injury/Evaluation/Distance from Blast (I.E.D.) checklist (see Figure).

Figure. (FOUO) I.E.D. Checklist

<p>Injury - Physical damage to the body or body part of the Service member? (Yes/No).</p> <p>Evaluation - Referral for a medical evaluation based on involvement in a mandatory event or demonstration of any of the "HEADS" symptoms at any point,</p> <ul style="list-style-type: none">H – Headaches and/or Vomiting (Yes/No)E - Ears ringing (Yes/No)A – Amnesia and/or altered consciousness and/or loss of consciousness (Yes/No)D - Double vision and/or dizziness (Yes/No)S - Something feels wrong or is not right (Yes/No) <p>Distance or proximity to blast or damage - Was the Service member within 50 meters of blast (Yes/No). Record the distance from the blast.</p> <p style="text-align: center;">FOR OFFICIAL USE ONLY</p>
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Service members will be referred for a medical evaluation based on: involvement in a mandatory event; any “Yes” response in screening; or demonstration/observation of any of the “HEADS” symptoms at any point. After the I.E.D. assessment is complete, the results shall be recorded for each individual involved in the event and submitted as part of the significant activities (SIGACT) report required for blast-related events or the events outlined in paragraphs 1.a. through 1.d. of this attachment.

3. (FOUO) REPORTS. Minimum required data fields for monthly reports to the JTAPIC are:

- a. (FOUO) Date of Mandatory Event.
- b. (FOUO) Type of Mandatory Event triggering evaluation.
- c. (FOUO) SIGACT number (if applicable).
- d. (FOUO) Personal identifier (Social Security Number or Battle Roster Number).
- e. (FOUO) Unit.
- f. (FOUO) Combatant Command in which the event occurred.
- g. (FOUO) Service member’s distance from a blast.
- h. (FOUO) The disposition of any mandated medical evaluation (return to duty after 24 hours?).

4. (FOUO) MEDICAL GUIDANCE. All deployed medical personnel are required to use the revised clinical algorithms in Attachment 3 for treatment of concussion in the deployed setting. A summary of this medical guidance is provided in paragraphs 4.a. through 4.d. of this attachment. All commanders shall support the medical guidance.

- a. (FOUO) A 24-hour rest period for all exposed personnel involved in a mandatory screening event described in paragraphs 1.a.- d. of this attachment. The 24-hour rest period begins at the time of the event. Commanders may determine that mission requirements supersede individual Service member welfare in certain circumstances determined at the commander’s discretion. Each waiver will be documented in the required report described in paragraphs 3.a.-h. of this attachment.

b. (FOUO) First diagnosed concussion: Mandatory minimum 24-hour recovery period unless clinical evaluation directs longer.

c. (FOUO) Recurrent concussions (within a 12-month period): Requires longer mandatory recovery period than with initial concussive event depending on number of incidents. Recovery period includes adequate sleep (8 uninterrupted hours) and pain control.

(1) (FOUO) If two documented concussions have occurred within the past 12 months, return to duty is delayed for an additional 7 days following symptom resolution.

(2) (FOUO) If three or more documented concussions have occurred within the past 12 months, return to duty is delayed until a recurrent concussion evaluation has been completed.

(3) (FOUO) All sports and other activities with risk of concussion are prohibited until the Service member is cleared.

(4) (FOUO) Commanders may impose more stringent requirements based on mission requirements and after consultation with medical personnel.

c. (FOUO) Clarified guidance on documentation of a Military Acute Concussion Evaluation (MACE) to ensure that the three components that affect decisions within the clinical practice guideline (CPG) (cognitive score, neurological history and exam, and the presence of symptoms) are proficiently documented. Documentation can be accomplished with the mnemonic "CNS" (medical abbreviation for central nervous system).

(1) (FOUO) C – Cognitive score (reported with 30 point score).

(2) (FOUO) N – Neurological exam (reported as "Green" (normal) or "Red" (abnormal)).

(3) (FOUO) S – Symptoms reported as "A" (none reported) or "B" (at least one symptom reported).

(4) (FOUO) Example of summary documentation of MACE screening evaluation can be "24/Red/B" indicating a cognitive score of 24, abnormal neurological examination, and patient reporting presence of at least one symptom.

d. (FOUO) The revised CPG provides elaborated guidance for a medic or corpsman with proper training to remotely manage concussion under the telephonic or

telemedicine supervision of a properly privileged provider for traumatic brain injury if no red flags (defined in Attachment 3) are present.

5. (FOUO) RECURRENT CONCUSSION EVALUATION. The recurrent concussion evaluation is required for those who have sustained three documented concussions within 12 months. The purpose of the recurrent concussion evaluation is to provide maximum protection to the Service member and preserve the fighting force. Results of the evaluation will be used to guide treatment in those who are symptomatic and guide return-to-duty determinations in those who are not.

a. (FOUO) Comprehensive Neurological Evaluation. A careful examination of the injury history will be required to make clinically sound decisions. Such information includes, but is not limited to, the level of concussion severity, the duration of symptoms, and the result of sustained exertion on symptoms (e.g., recurrence of headaches after 2 days of normal duty). The Neurobehavioral Symptom Inventory, Acute Stress Disorder Questionnaire, and a vestibular assessment must occur as part of this examination.

b. (FOUO) Neuroimaging. Initiated according to provider judgment.

c. (FOUO) Neuropsychological Assessment. A variety of neurobehavioral assessment tools are available. No one tool is recommended over another. Rather, domains affected by concussion should be evaluated over a 4-hour period. The evaluation must include a measure of effort, including:

- (1) (FOUO) Attention.
- (2) (FOUO) Memory.
- (3) (FOUO) Processing speed.
- (4) (FOUO) Executive functioning.
- (5) (FOUO) Social pragmatics.

d. (FOUO) Functional Assessment. A functional assessment is initiated according to the clinical judgment of the evaluating occupational therapist or physical therapist.

e. (FOUO) Duty Status Determination. The neurologist, or other qualified licensed provider knowledgeable about concussion, will determine the return-to-duty status after reviewing the results of the entire evaluation as described in this section.

(1) (FOUO) If the Service member is returned to duty and a subsequent concussion is sustained, the clinical algorithms should be followed.

(2) (FOUO) Service members will not require another recurrent concussion evaluation unless symptoms are persistent or if an additional three concussions are sustained within a 12-month period.

(3) (FOUO) Providers must be vigilant for persistent signs and symptoms of concussion with any recurrent concussion, as there is an increased risk with multiple concussions.

ATTACHMENT 3

(FOUO) MEDICAL ALGORITHMS

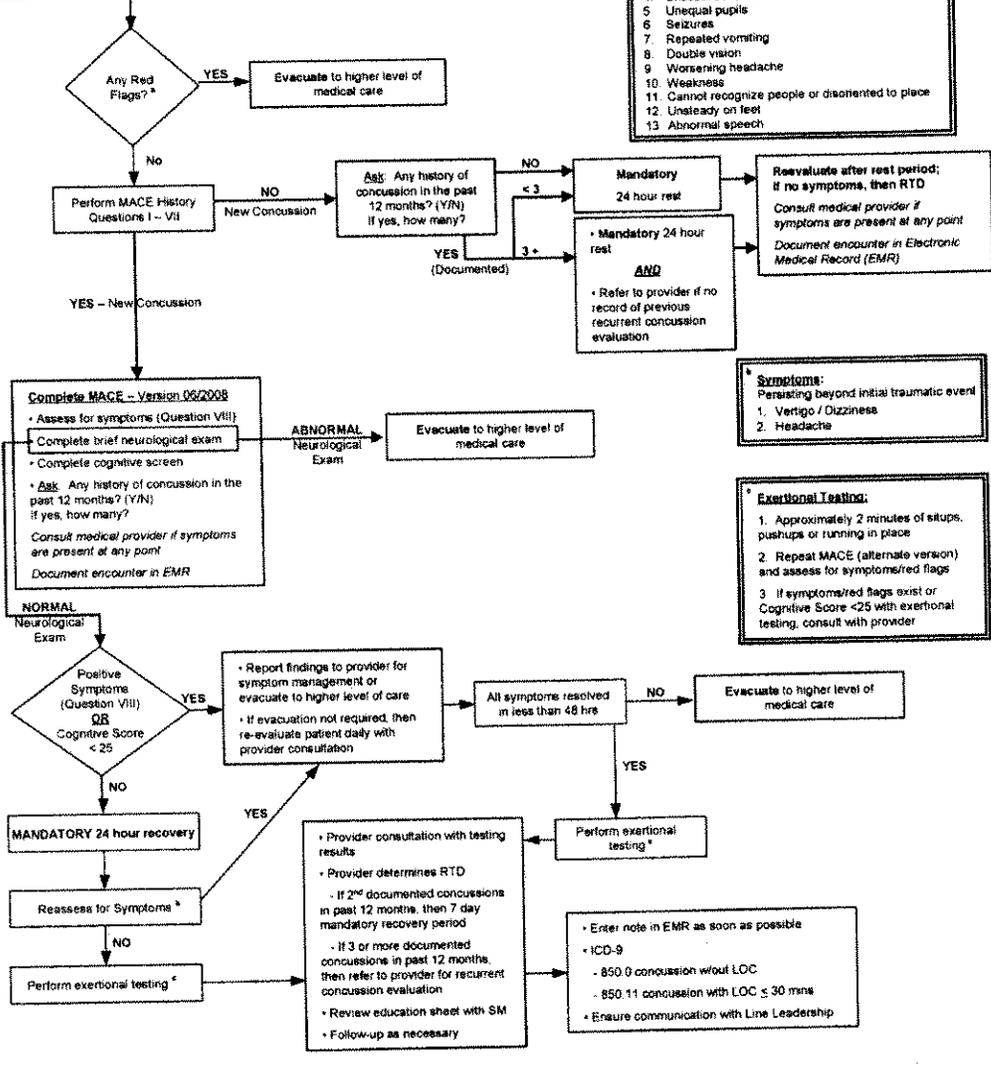
Figure 1. Combat Medic/Corpsman Concussion (mild TBI) Triage (Pre-Hospital / No medical officer in the immediate area)

Traumatic Event or Head Injury Occurs – Concussion Possible
Mandatory Events Requiring MACE

- Any Service Member in a vehicle associated with a blast event, collision or rollover
- Any Service Member within 50 meters of a blast (inside or outside)
- Anyone who sustains a direct blow to the head
- Command directed, such as but not limited to repeated exposures

Possible Concussion
 Anyone who was dazed, confused, saw "flares", lost consciousness (even momentarily) or has memory loss as a result of an explosion/blast, fall, motor vehicle crash or other event involving abrupt head movement, a direct blow to the head or other head injury

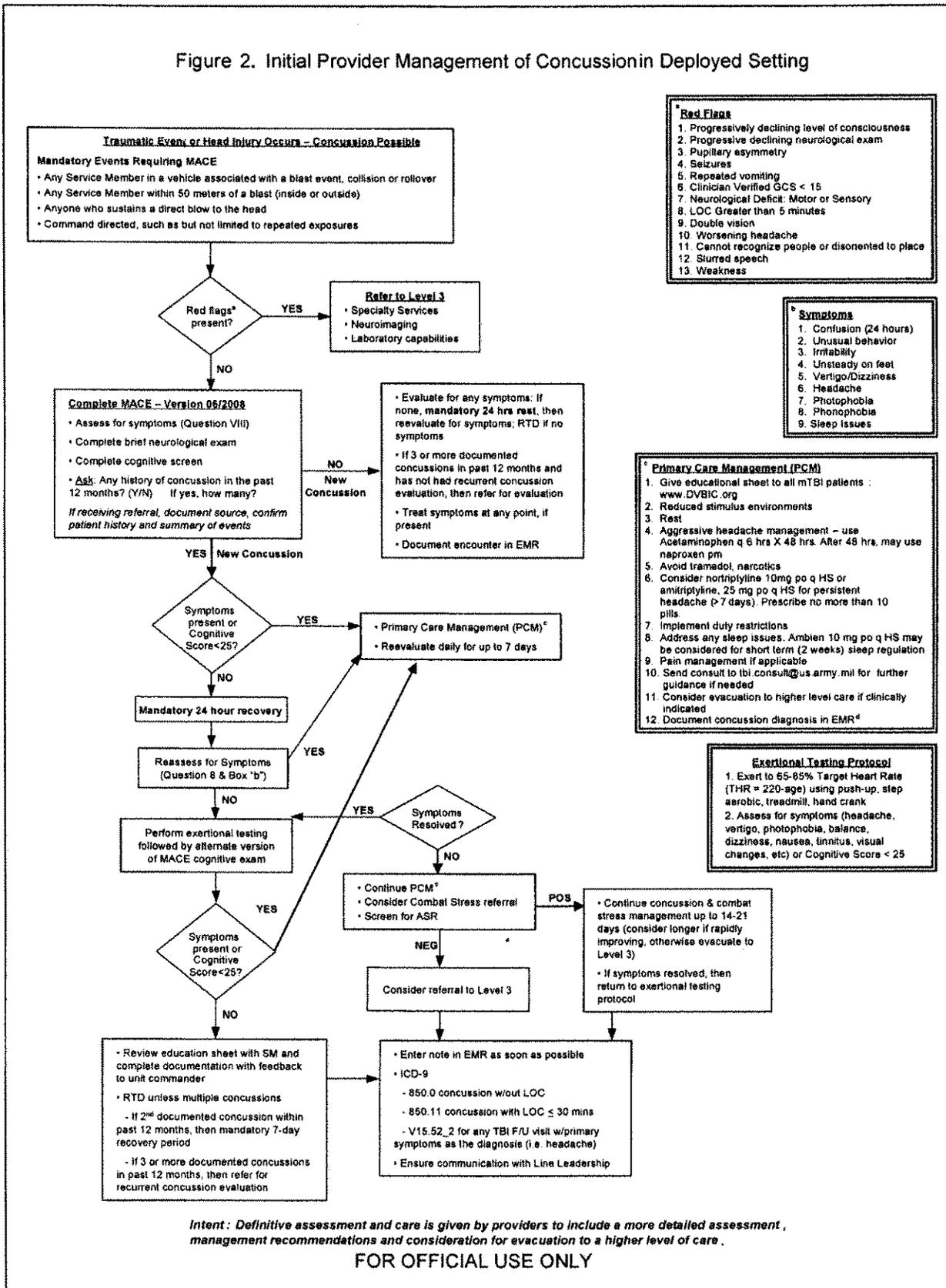
- Red Flags :**
1. WITNESSED Loss of Consciousness (LOC)
 2. 2 or more blast exposures within 72 hrs
 3. Amnesia /Memory problems
 4. Unusual behavior
 5. Unequal pupils
 6. Seizures
 7. Repeated vomiting
 8. Double vision
 9. Worsening headache
 10. Weakness
 11. Cannot recognize people or disoriented to place
 12. Unsteady on feet
 13. Abnormal speech



Intent : The goal is to assess for red flags quickly and if a service member is found to require further consultation, the medic / corpsman is given guidance to further discuss the injury with a provider.

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Figure 2. Initial Provider Management of Concussion in Deployed Setting



**Figure 3. Comprehensive Concussion Algorithm
Referral from Level I or II or Poly-Trauma**

-Confirm TBI evaluation
-Review records
-Perform comprehensive exam*
-If 3 or more documented concussions in 12 months, then recurrent concussion evaluation must take place

Positive exam findings or other CT indications?

Perform CT Scan

Positive CT Scan

-Neurosurgical consult
-Consider evacuation to Level IV

-Neurocognitive Assessment
-Treatment trial^f
-Specialty referral for associated symptoms if available (ENT, vision, PT, etc.)
-Re-evaluate every 72 hours minimum up to 14 days

Symptoms Resolved?

Consider evacuation to Level IV

Perform exertional testing^d followed by alternate version of MACE cognitive portion

^eEvaluate for symptoms AND cognitive score

Positive symptoms?

-Provide education to all -RTD; unless 2nd concussion in the past 12 months, then mandatory 7 day rest period

Consider evacuation to Level IV

No positive symptoms but cognitive <25?

-Provide education to all -RTD; unless 2nd concussion in the past 12 months, then mandatory 7 day rest period

Refer to psychology for further evaluation

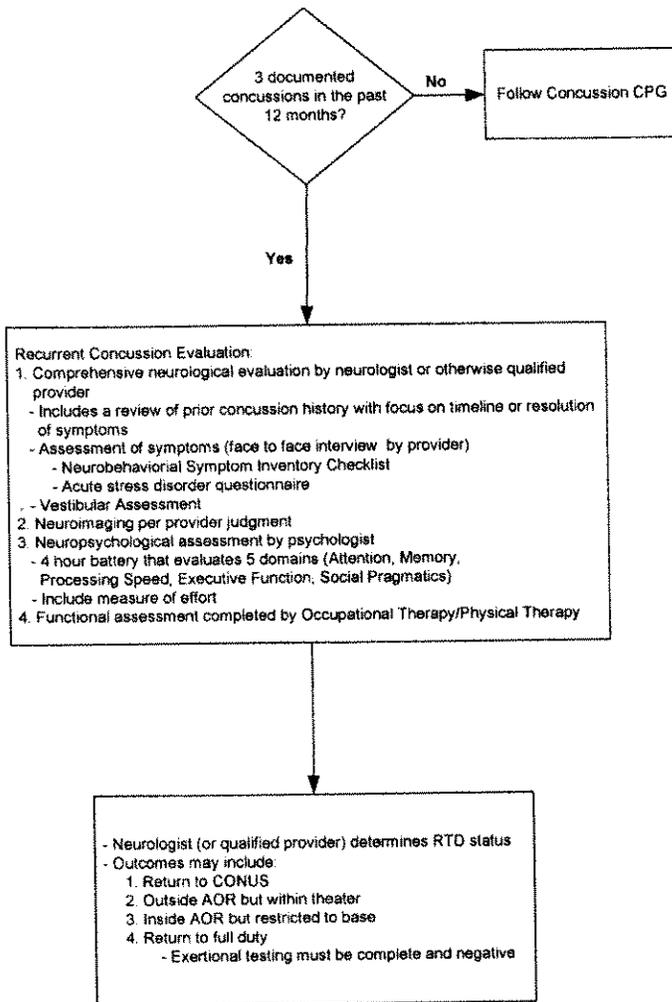
Document all encounters as soon as possible in EMR^g

<p>*Comprehensive Exam</p> <ol style="list-style-type: none"> 1. Neurologic exam 2. Psychological exam 3. Other exams as needed: <ol style="list-style-type: none"> a. ENT exam b. Eye exam c. Balance Exam
<p>*CT Indications^h (Jagoda, 2008)</p> <ol style="list-style-type: none"> 1. Physical evidence of trauma above the clavicles 2. Seizures 3. Vomiting 4. Headache 5. Short-term memory deficits 6. Age > 60 7. Drug or alcohol intoxication 8. Coagulopathy
<p>*Treatment Trial</p> <ol style="list-style-type: none"> 1. Review educational sheet with all concussion patients www.DVBIC.org 2. Reduce stimulus environments 3. Avoid tramadol, narcotics for headache 4. Consider nortriptyline 10mg po q HS or amitriptyline, 25 mg po q HS for persistent headache (>7 days). Prescribe no more than 10 pills. 5. Implement duty restrictions 6. Send consult to tbi.consult@us.army.mil for further guidance if needed 7. Consider or evacuation to higher level care if clinically indicated 8. Document concussion diagnosis in EMR (ICD codingⁱ) 9. Address any sleep issues. Ambien 10 mg po q HS may be considered for short term (2 weeks) sleep regulation 10. Manage pain if applicable
<p>*Exertional Testing Protocol</p> <ol style="list-style-type: none"> 1. Exert to 65-85% Target Heart Rate (THR=220-age), treadmill, hand crank, push-ups/sit-ups, or other activity. 2. Assess for symptoms (headache, vertigo, photophobia, balance, dizziness, nausea, tinnitus, visual changes, others) or Cognition Score < 25
<p>*ICD-9 Codes</p> <p>850.0 concussion w/o LOC (for new diagnosis) 850.11 concussion w/ LOC ≤ 30 min (for new diagnosis) V15.52_2 for any TBI F/U visit w/primary symptoms as the diagnosis (i.e. headache)</p>

Intent: Additional resources available at Level 3 facilities allow further evaluation and more comprehensive management for those patients who present acutely with concussion and/or have persistent symptoms.

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Figure 4. Recurrent Concussion (3 documented in 12 month span)
Evaluation Algorithm



All evaluations must be entered in EMR

Mission requirements may supersede individual member welfare in certain operational environments.

Intent: To ensure those Service members who have sustained 3 documented concussions in a 12 month period receive a recurrent concussion evaluation in order to guide further treatment or guide return to duty recommendations.

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GLOSSARYDEFINITIONS

Unless otherwise noted, the following terms and their definitions are for the purposes of this DTM.

amnesia. A lack of memory. Amnesia related to trauma, such as concussion, can be either antegrade or retrograde.

antegrade amnesia. The inability to form new memories following the traumatic event (typically not permanent).

retrograde amnesia. The loss of memory for events that occurred prior to the traumatic event.

concussion/mild traumatic brain injury. The diagnosis of concussion is made when two conditions are met. In the absence of documentation, both conditions are based on self-report information.

An injury event must have occurred.

The individual must have experienced one of the following:

- Alteration of consciousness lasting less than 24 hours;
- Loss of consciousness, if any, lasting for less than 30 minutes;
- Memory loss after the event, called post-traumatic amnesia, that lasts for less than 24 hours; or
- Normal structural neuroimaging.

deployed. All troop movement of Active Component and Reserve Component personnel resulting from a Joint Chiefs of Staff/unified command deployment for over 30 continuous days or greater to a location outside the United States that does not have a permanent military treatment facility (funded by the DHP). This definition will facilitate the capture of naval personnel afloat should they be subjected to concussive injuries due to explosions or explosive devices.

event trigger. The occurrence of one of the mandatory events listed in section 1 of Attachment 2, which directs a specified leadership action such as sending the Service member for a medical evaluation.

MACE. A three-part medical screening tool developed by DVBIC to assist clinical providers with the evaluation of concussion. This tool is available to medical personnel by emailing: info@DVBIC.org.

medical evaluation or assessment. A meeting between a Service member and a person with medical training (medic/corpsman, physician assistant, physician, etc.) to ensure the health and well being of the Service member. Components of this evaluation include reviewing a history (events surrounding injury, review of symptoms, etc.), a physical examination, and a review of the treatment plan with the Service member.

neuroimaging. A radiographic imaging study to evaluate the brain, to include computerized tomography scan or a magnetic resonance imaging.

post-traumatic amnesia. Period of amnesia following a traumatic brain injury.