



Department of Defense **INSTRUCTION**

NUMBER 6490.11
September 18, 2012

USD(P&R)

SUBJECT: DoD Policy Guidance for Management of Mild Traumatic Brain Injury/Concussion in the Deployed Setting

References: See Enclosure 1

1. PURPOSE. This Instruction:

a. In accordance with the authority in DoD Directive (DoDD) 5124.02 (Reference (a)), establishes policy, assigns responsibilities, and provides procedures on the management of mild traumatic brain injury (mTBI), also known as concussion, in the deployed setting. See Glossary for definition of mTBI.

b. Incorporates and cancels Directive-Type Memorandum 09-033 (Reference (b)).

c. Standardizes terminology, procedures, leadership actions, and medical management to provide maximum protection of Service members.

2. APPLICABILITY. This Instruction 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 DoD (hereinafter referred to collectively as the "DoD Components").

3. DEFINITIONS. See Glossary.

4. POLICY. It is DoD policy that:

a. DoD shall identify, track, and ensure the appropriate evaluation and treatment of Service members exposed to potentially concussive events, to include blast events.

b. Service members exposed to a potentially concussive event shall be medically assessed as close to the time of injury as possible.

c. Medically documented mTBI/concussion in Service members shall be clinically evaluated, treated, and managed according to the most current DoD clinical practice guidance for the deployed environment found at the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injuries (DCoE) website (Reference (c)).

d. Recurrent concussion shall be managed according to the most current DoD clinical practice guidance for the deployed setting found at Reference (c).

e. Potentially concussive events, results of concussion screening, and diagnosed concussions shall be appropriately documented, to the maximum extent possible in the Service member's electronic health record.

f. All individually identifiable information will be protected in accordance with DoDD 5400.11, DoD 5400.11-R, and DoD 6025.18-R (References (d), (e), and (f)).

g. DoD civilian employees will be treated and managed the same as military Service members to the extent practical and consistent with DoDD 1404.10 (Reference (g)).

5. RESPONSIBILITIES. See Enclosure 2.

6. PROCEDURES. See Enclosure 3.

7. INFORMATION COLLECTION REQUIREMENTS. The report on mTBI/concussion sustained in the deployment setting referred to in paragraphs 4.b, 6.e., and 8.b. of Enclosure 2 and section 3 of Enclosure 3 of this Instruction has been assigned report control symbol DD-HA(AR)2404 in accordance with the procedures in Directive-type Memorandum 12-004 (Reference (h)) and DoD 8910.1-M (Reference (i)).

8. RELEASABILITY. UNLIMITED. This Instruction is approved for public release and is available on the Internet from the DoD Issuances Website at <http://www.dtic.mil/whs/directives>.

9. EFFECTIVE DATE. This Instruction:

a. Is effective September 18, 2012.

b. Must be reissued, cancelled, or certified current within 5 years of its publication in accordance with DoD Instruction 5025.01 (Reference (j)). If not, it will expire effective September 18, 2022 and be removed from the DoD Issuances Website.



Erin Conaton
Under Secretary of Defense
for Personnel and Readiness

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Glossary

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ENCLOSURE 1

REFERENCES

- (a) DoD Directive 5124.02, "Under Secretary of Defense for Personnel and Readiness (USD(P&R))," June 23, 2008
- (b) Directive Type Memorandum 09-033, "Policy Guidance for Management of Concussion/Mild Traumatic Brain Injury in the Deployed Setting," June 21, 2010 (hereby cancelled)
- (c) DCOE Website, "TBI Clinical Documents,"
<http://www.dcoe.health.mil/ForHealthPros/TBIInformation.aspx>
- (d) DoD Directive 5400.11, "DoD Privacy Program," May 8, 2007, as amended
- (e) DoD 5400.11-R "Department of Defense Privacy Program," May 14, 2007
- (f) DoD 6025.18-R, "DoD Health Information Privacy Regulation," January 24, 2003
- (g) DoD Directive 1404.10, "DoD Civilian Expeditionary Workforce," January 23, 2009
- (h) Directive Type Memorandum 12-004, "DoD Internal Information Collections," April 18, 2012
- (i) DoD 8910.1-M, "Department of Defense Procedures for Management of Information Requirements," June 30, 1998
- (j) DoD Instruction 5025.01, "DoD Directives Program," October 28, 2007, as amended
- (k) DoD Instruction 6200.05, "Force Health Protection (FHP) Quality Assurance (QA) Program," February 16, 2007
- (l) DoD Directive 6025.21E, "Medical Research for Prevention, Mitigation, and Treatment of Blast Injuries," July 5, 2006
- (m) DoD 6025.13-R, "Military Health System Clinical Quality Assurance Program Regulation," June 11, 2004
- (n) Cicerone, K.D. and Kalmar, K., "Persistent post-concussion syndrome: The structure of subjective complaints after mild traumatic brain injury," *Journal of Head Trauma Rehabilitation* 1995; 10(3): 1-17

ENCLOSURE 2

RESPONSIBILITIES

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

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 mTBI/concussion management training standards.

 - b. Plan, program, budget, and execute the development and fielding of new technologies and programs to support this Instruction.

3. DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR FORCE HEALTH PROTECTION AND READINESS (DASD(FHP&R)). The DASD(FHP&R) under the authority, direction, and control of the USD(P&R) through the ASD(HA), shall:
 - a. Develop policy and provide guidance on the implementation of this Instruction.

 - b. Identify the capability gaps of current technologies and programs and, through the Defense Health Program, support research, development, testing, and evaluation programs to support the DoD mTBI/concussion policy.

 - c. Develop Force Health Protection quality assurance metrics in accordance with DoD Instruction 6200.05 (Reference (k)).

 - d. Develop and modify this Instruction as necessary based upon reporting summaries received from the DCoE.

 - e. Provide policy direction and strategic oversight to the Director, Tricare Management Activity (TMA) in the implementation of DCoE procedures.

4. DIRECTOR, TMA. The Director, TMA, under the authority, direction, and control of the ASD(HA) through the DASD(FHP&R), shall ensure the DCoE executes the following responsibilities:
 - a. Coordinate mTBI/concussion exposure surveillance and data analysis and promote data sharing with the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)), the

Director of the Joint Improvised Explosive Device Defeat Organization, and the Secretary of the Army in his or her capacity as DoD Executive Agent for Medical Research for Prevention, Mitigation, and Treatment of Blast Injuries as designated in DoDD 6025.21E (Reference (1)).

b. Generate comprehensive, retrospective analytical reports of relevant event-triggered mTBI/concussion data and activities of the Services and Combatant Commanders and coordinate blast-specific data analyses with the Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC) Program Office. Disseminate results to Combatant Commands, Military Department Secretaries, Service Chiefs, and ASD(R&E) summarizing injury trends. Recommend modifications to the policy based upon summary reports.

c. Develop event-specific monitoring summaries in coordination with the Services and Commander of Combatant Commands.

d. Review and analyze mTBI/concussion clinical guidance to provide updates, as indicated.

5. 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 policies are developed that support the administrative management rules addressing the unique concerns of the Reserve Component relating to the prevention and rehabilitation of traumatic brain injury for the Ready Reserve.

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

a. Develop Service mTBI/concussion policies and procedures consistent with this Instruction and recommend suggested procedural changes to the ASD(HA).

b. Program and budget for necessary manpower and resources to implement this Instruction.

c. Develop and support effective training plans for:

(1) Early detection of potentially concussive events for line leadership and Service members.

(2) Medical personnel on the use of mTBI/concussion algorithms in accordance with Service policies.

d. Develop Service reporting guidelines for potentially concussive events in accordance with section 3 of Enclosure 3 of this Instruction.

e. Ensure Service submission of monthly tracking reports to the JTAPIC Program Office.

f. Support medical management and event tracking and follow-up medical care for Service members.

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

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

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

- a. Develop command-specific procedures for Service component reporting of potentially concussive events and support training programs for leaders on event-triggered screening guidelines.
- b. Submit monthly tracking reports of potentially concussive events to the JTAPIC Program Office for Service members in accordance with section 3 of Enclosure 3 of this Instruction.
- c. Monitor Service component compliance of monthly reporting requirements and quality management.

ENCLOSURE 3

PROCEDURES

1. POTENTIALLY CONCUSSIVE EVENTS. Events requiring mandatory rest periods and medical evaluations and reporting of exposure of all involved personnel include, but are not limited to:

- a. Involvement in a vehicle blast event, collision, or rollover.
- b. Presence within 50 meters of a blast (inside or outside).
- c. A direct blow to the head or witnessed loss of consciousness.
- d. Exposure to more than one blast event (the Service member’s commander shall direct a medical evaluation).

2. COMMAND GUIDANCE

a. Commanders or their representatives are required to assess all Service members involved in potentially concussive events, including those without apparent injuries, as soon as possible using the Injury/Evaluation/Distance (I.E.D.) checklist (see Figure).

Figure. I.E.D. Checklist

Injury	Physical damage to the body or body part of a Service member?	(Yes/No)
Evaluation	H – Headaches and/or vomiting?	(Yes/No)
	E – Ear ringing?	(Yes/No)
	A – Amnesia, 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)
Distance	Was the Service member within 50 meters of the blast? Record the distance from the blast.	(Yes/No) Not Applicable

b. Service members will be referred for a medical evaluation if involved in a potentially concussive event as defined in section 1 of this enclosure, if there is a “Yes” response on the I.E.D. Checklist, or if they demonstrate any of the symptoms listed at any point after an injury event (see Figure). After the I.E.D. assessment is complete, record the results for each individual involved in the event and submit as part of the significant activities (SIGACT) report required for blast-related events or the events outlined in paragraphs 1.a. through 1.e. of this enclosure.

3. **REPORTS.** The line commander is responsible to ensure all reports are completed as operational conditions permit, preferably within 24 hours. The minimum required data fields for the monthly reports to the JTAPIC are:

- a. Date of potentially concussive event.
- b. Type of potentially concussive event triggering evaluation.
- c. SIGACT number (if applicable).
- d. Personal identifier (e.g., DoD identification number or Battle Roster Number).
- e. Service member's name.
- f. Unit name, unit identification code, and home duty station.
- g. Combatant Command in which the event occurred.
- h. Service member's distance from the blast when applicable.
- i. The disposition following the medical evaluation (return to duty after 24 hours, commander's justification to return to duty prior to 24 hours, or did not return to duty after 24 hours).

4. **MEDICAL GUIDANCE.** All deployed medical personnel must use, and commanders support, the most current clinical practice guidance for the deployed environment when possible. A complete listing of the most current guidance is provided on the DCoE website at <http://www.dcoe.health.mil/ForHealthPros/TBIInformation.aspx> and is summarized in this section.

a. **Potentially Concussive Event.** Service members involved in a potentially concussive event as described in section 1 of this enclosure are required to rest for 24 hours, beginning at the time of the event. Commanders may determine that mission requirements supersede these recommendations in certain circumstances. If the 24-hour rest period is delayed or postponed, document the circumstance in the monthly report to the JTAPIC.

b. **First Diagnosed Concussion.** All Service members diagnosed with a mTBI/concussion must have, at a minimum, 24 hours' recovery unless the results of subsequent clinical evaluation indicate a longer period is needed.

c. **Second Diagnosed Concussion (Within a 12-month Period).** If two diagnosed mTBI/concussions have occurred within the past 12 months, return to duty is delayed for an additional 7 days following symptom resolution.

d. Recurrent Concussion (Within a 12-month Period). If three diagnosed mTBI/concussions have occurred within the past 12 months, return to duty is delayed until a recurrent concussion evaluation has been completed.

(1) The recovery period for Service members experiencing recurrent concussions depends on the number of incidents.

(2) Recovery care includes uninterrupted sleep and pain management.

(3) All sports and other activities with risk of concussion are prohibited until the Service member is cleared by a licensed independent practitioner as defined in DoD 6025.13-R (Reference (m)).

(4) Commanders may impose longer recovery periods based on mission requirements and after consultation with medical personnel.

e. MTBI/Concussion Screening and Initial Evaluation. Use section one of the Military Acute Concussion Evaluation (MACE) to complete the initial screening of Service members involved in a potentially concussive event. Complete the evaluation as close as reasonably possible to the time of initial injury. If a concussion is suspected, report the results of all three scored sections in the electronic health record as follows:

(1) C - Cognitive score (reported with 30 point score).

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

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

(4) 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.

(5) Document the results of the MACE evaluation including the cognitive score, neurological examination, and symptoms in the electronic health record using the most current International Classification of Diseases codes.

5. RECURRENT CONCUSSION EVALUATION. Service members who have sustained three diagnosed concussions within a 12 month period must receive a recurrent concussion evaluation. Additionally, a recurrent concussion evaluation may be performed any time it is clinically indicated, i.e., if symptoms are persistent. Use the results of the evaluation to guide management, treatment, and return-to-duty determinations. The recurrent concussion evaluation is comprised of the following:

a. Comprehensive Neurological Evaluation. A careful examination of the injury history is required to make clinically sound decisions. Such information includes, but is not limited to, the level of mTBI/concussion severity, the nature and 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, a validated Acute Stress Reaction assessment, and a vestibular assessment must occur as part of this examination. The Neurobehavioral Symptom Inventory tool can be obtained by accessing <http://www.dvbic.org/images/pdfs/Clinical-Tools/F--Neurobehavioral-Symptoms.aspx>.

b. Neuroimaging. Neuroimaging will be initiated according to current clinical practice guidelines and evidence-based practices.

c. Neuropsychological Assessment. A variety of neuropsychological assessment tools are available as clinically indicated. No one tool is recommended over another. The assessment, if conducted, should include an effort measure. The following are examples of domains that can be affected by concussion and should be evaluated.

- (1) Attention.
- (2) Memory.
- (3) Processing speed.
- (4) Executive functioning.

d. Functional Assessment. The evaluating rehabilitation provider may initiate a functional assessment based on his or her clinical judgment. Rehabilitation providers should evaluate the Service member's performance and monitor symptoms before, during, and after functional assessment. Selected assessment activities should concurrently challenge specific vulnerabilities associated with mTBI including cognitive, sensorimotor, and physical endurance.

e. Duty Status Determination. The neurologist or other qualified licensed independent practitioner trained according to Service policies in the care of mTBI/concussion will determine the return-to-duty status after reviewing the results of the recurrent concussion evaluation. Medical providers must be vigilant for persistent signs and symptoms of mTBI/concussion with any recurrent concussion, as there is an increased risk of longer recovery time with multiple concussions.

GLOSSARY

PART I. ABBREVIATIONS AND ACRONYMS

ASD(HA)	Assistant Secretary of Defense for Health Affairs
ASD(RA)	Assistant Secretary of Defense for Reserve Affairs
ASD(R&E)	Assistant Secretary of Defense for Research and Engineering
DASD(FHP&R)	Deputy Assistant Secretary of Defense for Force Health Protection and Readiness
DCoE	Defense Center of Excellence for Psychological Health and Traumatic Brain Injury
DoDD	Department of Defense Directive
DoDI	Department of Defense Instruction
I.E.D.	injury/evaluation/distance
JTAPIC	Joint Trauma Analysis and Prevention of Injury in Combat
MACE	Military Acute Concussion Evaluation
mTBI	mild traumatic brain injury
SIGACT	significant activities
TMA	Tricare Management Activity
USD(P&R)	Under Secretary of Defense for Personnel and Readiness

PART II. DEFINITIONS

Unless otherwise noted, the following terms and their definitions are for the purpose of this Instruction.

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.

deployed. All troop movement of Active Component and Reserve Component personnel resulting from a Joint Chief of Staff or unified command deployment for more than 30 continuous days to a location outside the United States that does not have a permanent military treatment facility (funded by the Defense Health Program). This includes naval personnel afloat who might be subjected to concussive injuries.

effort measure. A tool used to evaluate the validity of scores obtained from a neurocognitive assessment test battery.

functional assessment. A functional assessment evaluates the service member's performance of military-relevant activities that simulate the multi-system demands of duty in a functional context.

licensed independent practitioner. Any individual permitted by law and Service regulations to provide care, treatment and services, without direction or supervision, within the scope of the individual's license and consistent with individually granted clinical privileges. This term is equivalent to healthcare provider.

MACE. A medical screening and assessment tool with four sections, three of which are scored. It was developed by the Defense and Veterans Brain Injury Center as a standardized form in which the history of a concussive event can be assessed. It also includes cognitive, neurological and symptoms sections designed to evaluate the status of a concussed Service member. This tool is available to medical personnel by e-mailing: info@DVBIC.org.

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

mTBI/concussion. The diagnosis of mild traumatic brain injury also known as 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 a normal structural neuroimaging by head CT or conventional brain MRI and 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, for events immediately surrounding the injury that lasts for less than 24 hours.

Neurobehavioral Symptom Inventory. A 22-item assessment commonly used to aid in determining mTBI. Symptoms such as decision-making difficulty or change in taste or smell are rated on a scale of 0-4. See Cicerone and Kalmar (1995) (Reference (n)) for additional explanation.

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

neuropsychological assessment. A series of tests carried out to assess the extent of impairment to a particular skill and to attempt to locate an area of the brain that may have been damaged after brain injury. A core part of a neuropsychological assessment is the administration of tests of cognitive functioning. Aspects of cognitive functioning that are assessed typically include attention, new-learning/memory, intelligence, processing speed, executive-functioning, and social pragmatics.

potentially concussive event. Events or incidents that may result in an individual experiencing a mTBI or concussion.

quality assurance. The systematic monitoring and evaluation of the various aspects of medical care to maximize the probability that minimum standards of quality are being met.

recurrent concussion. Three or more diagnosed mTBI/concussions within a 12 month period.