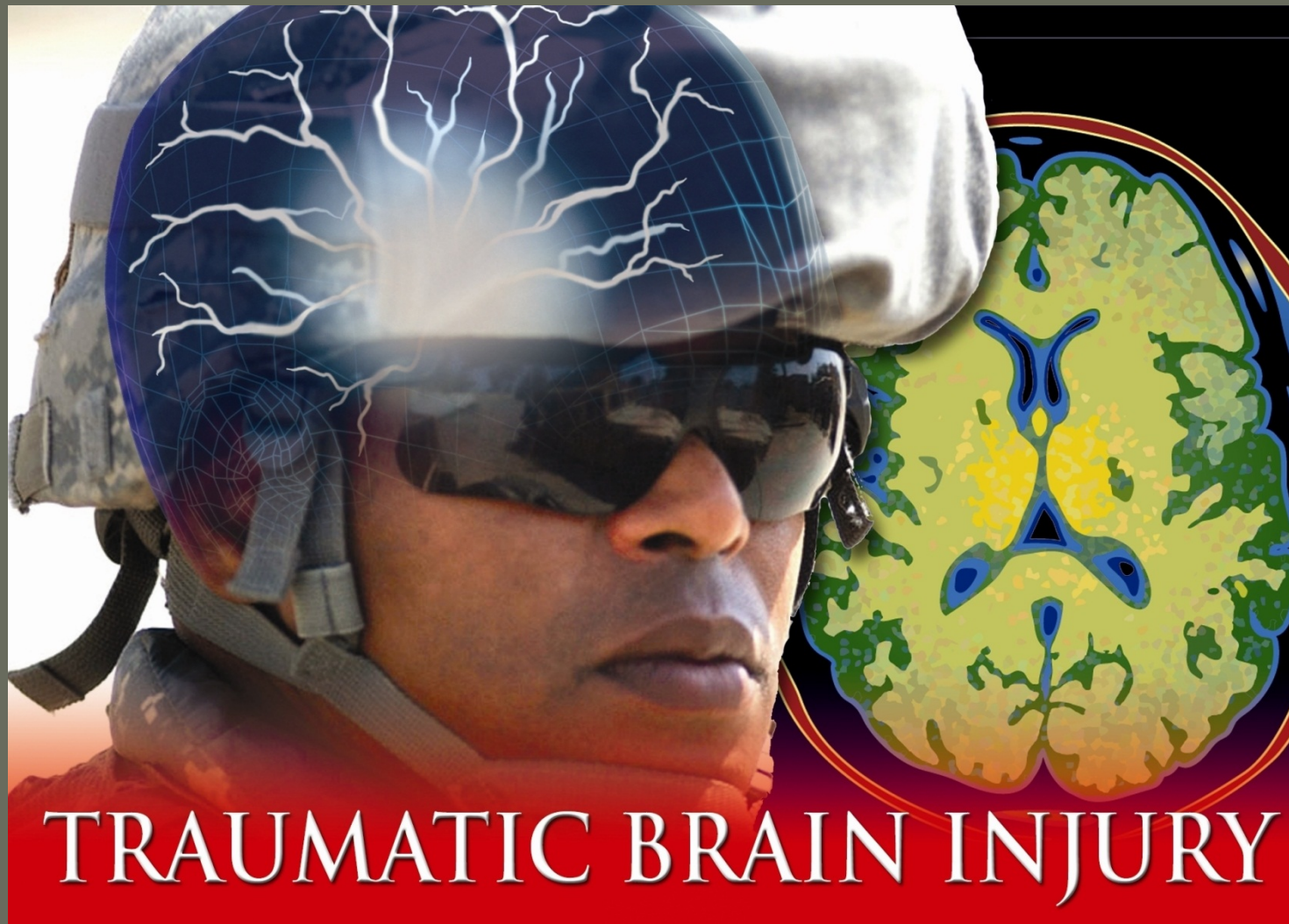




EVALUATE TRAUMATIC BRAIN INJURY





OVERVIEW



- Mandatory Events Requiring TBI Evaluation
- Signs & Symptoms
- Components of MACE Exam
- Required data for the SIGACT Report



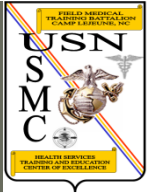
LEARNING OBJECTIVES

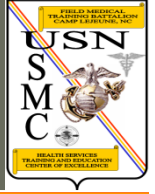
Please Read Your

Terminal Learning Objectives

And

Enabling Learning Objectives





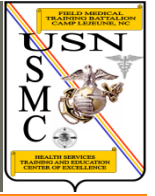
Mandatory Events Requiring TBI Evaluation

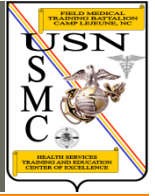


Mandatory Events Requiring TBI Evaluation



- Potentially Concussive Events
 - Vehicle blast, collision or rollover
 - Presence within 50 meters of a blast
 - A direct blow to the head
 - Exposure to more than one blast event





Signs & Symptoms



Signs & Symptoms



- TBI Can be Divided into 2 Categories
 - Primary Brain Injury
 - Secondary Brain Injury

Signs & Symptoms

- Primary Brain Injury
 - Direct trauma to the brain & associated structures
- Contusions
- Hemorrhages
- Lacerations





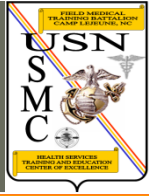
Signs & Symptoms



- Secondary Brain Injury
 - The ongoing injury processes from primary injury
 - Management of TBI is focused to limit or stop these secondary mechanisms
 - ICP
 - Hypoxia
 - Hypotension and inadequate CBF



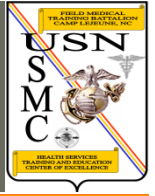
Signs & Symptoms



- Mild TBI
 - Loss of consciousness brief, usually a few seconds/minutes
 - Loss of consciousness does not have to occur
 - Testing and scans of the brain may appear normal
 - Most common: 75%-85% of all brain injuries are mild
 - 90% of individuals recover within 6-8 weeks



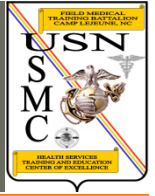
Signs & Symptoms



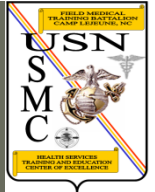
- Moderate TBI
 - Loss of consciousness lasts from a few minutes to a few hours
 - Confusion lasts from days to weeks
 - Physical, cognitive, and/or behavioral impairments last for months or are permanent
 - EEG/CAT/MRI are positive for brain injury



Signs & Symptoms



- Severe TBI
 - Prolonged unconscious state or coma lasts days, weeks, or months
 - Categories include:
 - Coma
 - Vegetative State
 - Persistent Vegetative State
 - Minimally Responsive State
 - Locked-in Syndrome

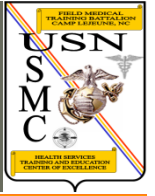


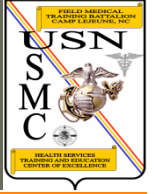
Signs & Symptoms

- If “Yes” on I.E.D. Checklist, refer for medical evaluation

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

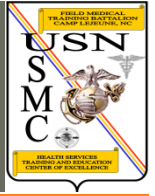




Components of MACE Examination



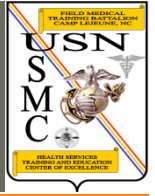
Components of MACE Exam



- Military Acute Concussion Evaluation
 - Tool for small-unit commanders and medical personnel
 - Assesses cognitive function following incidents



Components of MACE Exam



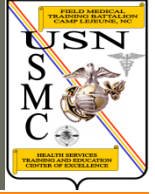
- Description of Incident
 - What happened?
 - Tell me what you remember.
 - Were you dazed, confused, “saw stars”?
 - Did you hit your head?



Components of MACE Exam



- Cause of Injury
 - Explosion/blast
 - Blunt object
 - Motor vehicle crash
 - Fragment
 - Fall
 - Gunshot wound
 - Other



Components of MACE Exam

- Was a Helmet Worn?
- Amnesia Before
 - Any events before that are not remembered?
- Amnesia After
 - Any events after that are not remembered?
- Loss of Consciousness?
 - Reported or Observed

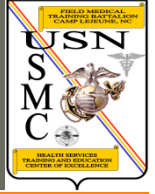


Components of MACE Exam



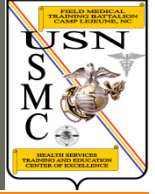
- Symptoms

- Headache
- Dizziness
- Memory Problems
- Balance Problems
- Nausea/vomiting
- Difficulty concentrating
- Irritability
- Visual disturbances
- Ringing in ears
- Other



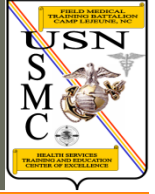
Components of MACE Exam

- Orientation
 - Month
 - Date
 - Day of Week
 - Year
 - Time
- Score ___/5



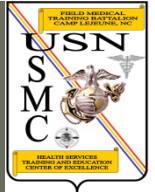
Components of MACE Exam

- Immediate Memory (3 attempts, any order)
 - Elbow
 - Apple
 - Carpet
 - Saddle
 - Bubble
- Score ___/15



Components of MACE Exam

- Neurological Screening
 - Eyes
 - Pupillary response and tracking
 - Verbal
 - Speech fluency and word finding
 - Motor
 - Pronator drift, gait/coordination
- Record Abnormalities



Components of MACE Exam

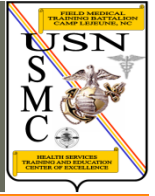
- Concentration
 - Reverse digits

4-9-3	6-2-9	0	1
3-8-1-4	3-2-7-9	0	1
6-2-9-7-1	1-5-2-8-5	0	1
7-1-8-4-6-2	5-3-9-1-4-8	0	1

- Months in reverse order (Dec-Nov-Oct-Sep...)
- Score___/5



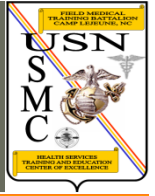
Components of MACE Exam



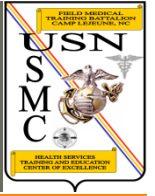
- Delayed Recall
 - Recall 5 words from earlier test (Do NOT reread)
 - Elbow
 - Apple
 - Carpet
 - Saddle
 - Bubble
- Score ___/5

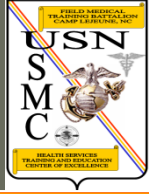


Components of MACE Exam



- Total Score ___/30
- Diagnosis
 - No Concussion
 - 850.0 Concussion without LOC
 - 850.1 Concussion with LOC
 - Other Diagnoses





Required Data for the SIGACT Report



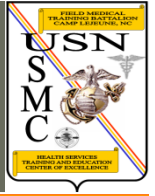
Required Date for SIGACT Report



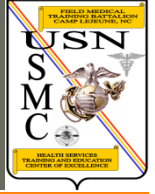
- After I.E.D./MACE Assessment, results shall be submitted with Significant Activities Report
- Required for all blast-related events



Required Date for SIGACT Report

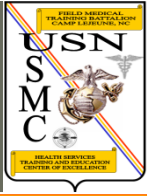


- Date of Event
- Type of Event
- SIGACT Report Number
- Personal Identifier (DOD ID, ZAP)
- Service Member's Name



Required Date for SIGACT Report

- Unit Name, UIC, and Home Duty Station
- Combatant Command
- Service Member's Distance from Blast
- Medical Disposition





EVALUATE TRAUMATIC BRAIN INJURY

