

CF OPERATING PROCEDURE
NO. 155-46

STATE OF FLORIDA
DEPARTMENT OF
CHILDREN AND FAMILIES
TALLAHASSEE, October 15, 2018

Mental Health/Substance Abuse

MANAGEMENT OF ACUTE NON-PENETRATING TRAUMATIC HEAD/BRAIN INJURY

1. Purpose. Residents in the State Mental Health Treatment Facilities (SMHTFs) shall receive appropriate medical evaluation and close, careful observation after any head injury. This policy is to provide a process staff should follow in every case of head injury to monitor for possible brain injury.

2. Scope. This operating procedure applies to residents in SMHTFs whether operated by the Department of Children and Families (DCF) or by contracted providers. This operating procedure applies only to non-penetrating head/brain injuries.

3. References.

a. [Center for Disease Control and Prevention \(CDC\): Heads Up to Clinicians: Updated Mild Traumatic Brain Injury Guideline for Adults, 2016](#).

b. [Revised Clinical Policy: Neuroimaging and decision making in Adult Mild Traumatic Brain Injury in the Acute Setting, American College of Emergency Physicians, 2009](#).

c. [Glasgow Coma Scale, CDC, 2016](#).

d. [Structured Approach to Assessment of the Glasgow Coma Scale, Sir Graham Teasdale, 2014](#).

4. Definitions.

a. Brain Injury. Also known as intracranial injury, occurs when an external force traumatically injures the brain. This traumatic injury is referred to as traumatic brain injury (TBI).

b. Closed Head Injury. Occurs when an individual receives a hard blow to the head from striking an object, but the object did not break the skull. The injury may be only a minor bump on the skull or a serious brain injury. Head injury can be classified into two major categories: Closed (non-penetrating) or Open (penetrating).

c. Head Injury. Any trauma to the scalp, skull or brain. The injury may be only a minor bump on the skull or a serious brain injury. Head injury can be classified into two major categories: Closed (non-penetrating) or Open (penetrating).

d. Open Head Injury. Occurs when the injury to the head results in an object penetrating the skull and entering the brain.

5. General Information.

a. This operating procedure is related only to closed/non-penetrating head/brain injuries (defined in paragraph 4b above).

This operating procedure supersedes CFOP 155-46 dated April 17, 2017.

OPR: SMF

DISTRIBUTION: X: OSGC; ASGO; Region/Circuit Mental Health Treatment Facilities.

b. Any head injury may lead to a brain injury. Head/brain injuries are potentially serious and can be fatal.

c. The gravity of the head/brain injury depends on the degree of the damage to the brain (immediate or delayed).

d. The brain may be damaged either at the time of head/brain injury or later as a result of an increase in intracranial pressure.

6. Procedure.

a. Immediately following any known or suspected injury to the head, residents must be assessed by a Physician or Advanced Registered Nurse Practitioner (ARNP).

b. The Glasgow Coma Scale (GCS) and the Neurological Flowsheet (Appendix A to this operating procedure) will be used to assist with monitoring signs of brain injury. The GCS (incorporated into the Neurological Flowsheet) must be completed by a Physician or ARNP. The GCS may also be administered by a Registered Nurse (RN) with education, training and experience using the GCS. Facilities shall ensure RN staff have training in the assessment of head/brain injury and use of the GCS.

c. The Physician or ARNP may order 1:1 supervision and/or notify emergency medical professionals for transport of resident when there is clinical indication of treatment required at another facility. Copies of the Neurological Flowsheet (Appendix A to this operating procedure) shall accompany the resident for additional off site assessment and treatment.

d. Residents suspected or known to have a head or brain injury are to be admitted to a medical unit, infirmary, or Emergency Room, as determined by a Physician or ARNP, depending on clinical indications that may include the following:

- (1) Loss of consciousness after a head injury;
- (2) Change in the resident's alertness (level of consciousness);
- (3) Vomiting;
- (4) Blood behind the ear drum;
- (5) Any change in vital signs from the resident's normal level;
- (6) Visual disturbances;
- (7) Vertigo;
- (8) Blood or spinal fluid from ear, nose or mouth;
- (9) Pupils unequal in size and/or unreactive to light;
- (10) Seizures;
- (11) Sensory or motor defect;
- (12) Evidence of skull fracture;
- (13) Significant soft tissue injury;

(14) The resident's neurological signs or symptoms *have not* returned to his/her preinjury condition;

(15) Any resident who needs to be kept on bed rest or under increased medical supervision; or,

(16) GCS Score less than 13.

e. If none of the clinical indications listed above in paragraph 6d above are present and the Physician/ARNP has released the resident from medical care, the resident may be returned to his/her home unit. However, if any of the above symptoms develop at any time in the future or up to six weeks following the injury, the resident must be returned to the Emergency Room, medical unit for observation, or infirmary and re-evaluated by a Physician/ARNP. If clinically necessary as determined by the Physician/ARNP, the resident may be returned to an Emergency Room, medical unit for observation, or infirmary as judged medically appropriate and so ordered.

f. If any of the symptoms or signs in paragraph 6d above recur after the resident has been returned to his/her home unit, and the resident is not ordered to an Emergency Room, medical unit for observation, or infirmary, then the attending Physician/ARNP shall document information in the health record that provides justification for the resident remaining in the home unit.

g. Signs and symptoms of a head/brain injury may take as long as six weeks to develop. Therefore, the resident should be re-evaluated frequently. Specifically, a RN with education, training and experience using the GCS shall perform and document a post-head injury assessment once per shift for six weeks. If clinically necessary, the resident may be transferred to a higher level of care for check/recheck if there is a specific change in resident's alertness, vomiting, visual disturbances, vertigo, seizures, sensory or motor deficit during that period.

BY DIRECTION OF THE SECRETARY:

(Signed original copy on file)

WENDY SCOTT
Director, State Mental Health Treatment Facilities, Policy and Programs

SUMMARY OF REVISED, ADDED, OR DELETED MATERIAL

No substantive changes have been made in this operating procedure.

NEUROLOGICAL FLOWSHEET

Date:	Time (use Military Time):																		
VITAL SIGNS	Breathing Pattern:																		
(see reverse)	Respiratory Rate:																		
	Blood Pressure:																		
	Pulse:																		
	Temperature:																		
SUBJECTIVE	Headache:																		
	Nausea/Vomiting:																		
EYES OPEN	4 = SPONTANEOUS 3 = To SPEECH 2 = To PAIN 1 = NONE C = Eyes CLOSED by Edema																		
BEST VERBAL RESPONSE	5 = ORIENTED 4 = CONFUSED 3 = INAPPROPRIATE 2 = INCOMPREHENSIBLE 1 = NONE																		
BEST MOTOR RESPONSE	6 = OBEYS COMMANDS 5 = LOCALIZES 4 = WITHDRAWAL 3 = ABNORMAL FLEXION 2 = EXTENSION 1 = NO MOVEMENT																		
GLASGOW COMA SCALE MODEL: (TOTAL) 13 – 15 = Mild (concussion, minor head trauma) 9 – 12 = Moderate (LOC > 2- min < 6 hrs) 3 – 8 = Severe (LOC > 6 hrs)																			
PUPIL REACTION	<u>RIGHT</u>	SIZE:																	
		REACTION:																	
PUPIL GAUGE (mm)		PUPIL REACTION:		EXTREMITIES: Record RIGHT ("R") and LEFT ("L") if there is a difference between the two sides.															
		B = BRISK S = SLUGGISH N = NO REACTION C = EYES CLOSED																	
PUPIL REACTION	<u>LEFT</u>	SIZE:																	
		REACTION:																	
MUSCLE STRENGTH ARMS	NP = Normal Power W = Weakness NR = No Response																		
MUSCLE STRENGTH LEGS	NP = Normal Power W = Weakness NR = No Response																		
	SEIZURE ACTIVITY:																		
	RN's INITIALS:																		
RN's Initials and Signatures																			
Instructions										Identifying Information									
<ol style="list-style-type: none"> To be completed in any head, neck, or supraclavicular injury with signs or symptoms of neurological damage. Vital Signs and Neuro checks must be completed at least q 1 hour x 4, then q 4 hours x 6, unless ordered otherwise by physician. Call M.D. ASAP if Glasgow Coma Scale total decreases > 2 points. Copy and send with EMS if resident is transported to hospital. 																			

NEUROLOGICAL FLOWSHEET – PAGE 2

VITAL SIGNS	DESCRIPTION	NURSING CONSIDERATION
Breathing Pattern – Enter the appropriate letter on the reverse side of this form.	Determined by Rate, Depth, and Regularity	Enter the appropriate capitalized first letter to denote breathing pattern
	Normal – Easy, Quiet, Rate = 10-24/min	
	Tachypnea – Rapid, Shallow > 24/min	
	Bradypnea – Slow < 10/min	
	Hyperventilation – Rapid, Loud, Deep Breathing	
	Cheyne-Stokes – Periods of deep breathing alternating with regularly recurring periods of apnea	
	Gasping – Spasmodic respiratory effort, may be regular or irregular	
	Apnea – Cessation of Respirations	
Blood Pressure	100 – 139/60 – 89	Watch for a combination of increased systolic pressure and widening pulse pressure which may indicate increasing Intracranial Pressure (ICP)
Pulse	60 – 100 beats per minute	Bradycardia may be an indication of increased ICP
Temperature	Oral 96.8 – 99.5° F; Rectal 97.3 – 100.2° F; Tympanic 97.2 – 100.0° F	
GLASGOW COMA SCALE		
EYES OPEN	Spontaneous: Eye opening is spontaneous if the patient’s eyes are already open at the time of the assessment with no stimulation other than that of the existing ambient environment. The patient can close his eyes to command.	
	To Speech: If the patient’s eyes are not open at the time of assessment, a response to voice is present if the eyes open when the patient’s name is spoken or shouted.	
	To Pain: If verbal stimulation is unsuccessful in eliciting eye opening, a response to pain is present if the eyes open when a standard pain stimulus is applied.	
	None: No eye response is present if the above attempts at stimulation are unsuccessful.	
BEST VERBAL RESPONSE	Oriented: After being aroused, the patient is asked name, place and date. The patient is oriented if the answers given are correct.	
	Confused: The patient is confused if the individual cannot answer the questions regarding name, place and date accurately but is still capable of producing phrases, sentences, or conversational exchanges.	
	Inappropriate: The patient cannot produce phrases, sentences or conversational exchanges but can produce an intact word in response to stimulation.	
	Incomprehensible: The patient can produce groans, moans, or unintelligible mumbblings, but cannot produce an intact word in response to stimulation.	
BEST MOTOR RESPONSE	None: The patient does not respond with any phonation to any stimulation no matter how prolonged or repeated.	
	Obeys Commands: In response to instructions, whether verbal or written, or through gestures, patient shows ability to comprehend the instruction and to physically execute it. A common example is to hold up two fingers. (Excludes grasp reflex or postural adjustments).	
	Localizes: When a standard painful stimulus is applied, the patient may move limb or body away from stimulus in a purposeful manner or attempt to push stimulus away.	
	Withdrawal: If the patient does not obey commands the standard pain stimulus is applied. Withdrawal is present if normal flexion of elbow or knee to local painful stimulus.	
	Abnormal Flexion: Abnormal flexion is present if there is slow withdrawal with pronation of wrist or adduction of shoulder.	
	Extension: Extension is present if there is extension of the elbow with pronation and adduction.	
	No Movement: The patient has no motor response to pain in any limb.	

REFERENCES: Briggs Corporation, Neurological Assessment Flowsheet, Des Moines, IA, 1992; Critical Care Concepts, Neuro Assessment Handout, January 4, 2006; Glasgow Coma Scale, Lenrow, D., Finegan, J., Cohen, S.; Traumatic Brain Injury.Com. Two Commerce Square, 2001 Market Street, Suite 2900, Philadelphia, PA 19103, Turner, K., Jones, A., Handa, A.; Emergency Management of Head Injuries, British Medical Journal Archives 00/05.