ACUTE CONCUSSION EVALUATION (ACE)

PHYSICIAN/CLINICIAN OFFICE VERSION

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Patient Name:_____
DOB: _____ Age:_____
Date:_____ ID/MR#_____

A. Injury Characteristics **Date/Time of Injury**_____**Reporter: __Patient __Parent __Spouse __Other**_____

1. Injury Description _____

_____

1a. Is there evidence of a forcible blow to the head (direct or indirect)? __Yes __No __Unknown
1b. Is there evidence of intracranial injury or skull fracture? __Yes __No __Unknown
1c. Location of Impact: __Frontal __Lft Temporal __Rt Temporal __Lft Parietal __Rt Parietal __Occipital __Neck __Indirect Force

2. Cause: __MVC __Pedestrian-MVC __Fall __Assault __Sports (*specify)*_____Other_____

3. Amnesia Before (Retrograde) Are there any events just BEFORE the injury that you/ person has no memory of (even brief)? __ Yes __No Duration

4. Amnesia After (Anterograde) Are there any events just AFTER the injury that you/ person has no memory of (even brief)? __ Yes __No Duration

5. Loss of Consciousness: Did you/ person lose consciousness? __ Yes __No Duration

6. EARLY SIGNS: __Appears dazed or stunned __Is confused about events __Answers questions slowly __Repeats Questions __Forgetful (recent info)

7. Seizures: Were seizures observed? No__ Yes___ Detail_____

B. Symptom Check List* Since the injury, has the person experienced any of these symptoms any more than usual today or in the past day?

Indicate presence of each symptom (0=No, 1=Yes). ***Lovell & Collins, 1998 JHTR***

PHYSICAL (10)		COGNITIVE (4)		SLEEP (4)	
Headache	0 1	Feeling mentally foggy	0 1	Drowsiness	0 1
Nausea	0 1	Feeling slowed down	0 1	Sleeping less than usual	0 1 N/A
Vomiting	0 1	Difficulty concentrating	0 1	Sleeping more than usual	0 1 N/A
Balance problems	0 1	Difficulty remembering	0 1	Trouble falling asleep	0 1 N/A
Dizziness	0 1	**COGNITIVE Total (0-4)** _____		**SLEEP Total (0-4)** _____	
Visual problems	0 1	**EMOTIONAL (4)**			
Fatigue	0 1	Irritability	0 1		
Sensitivity to light	0 1	Sadness	0 1		
Sensitivity to noise	0 1	More emotional	0 1		
Numbness/Tingling	0 1	Nervousness	0 1		
PHYSICAL Total (0-10) _____		**EMOTIONAL Total (0-4)** _____			
(Add Physical, Cognitive, Emotion, Sleep totals) Total Symptom Score (0-22)		_____			

Exertion: Do these symptoms worsen with:
Physical Activity __Yes __No __N/A
Cognitive Activity __Yes __No __N/A

Overall Rating: How different is the person acting compared to his/her usual self? (circle)

Normal 0 1 2 3 4 5 6 Very Different

C. Risk Factors for Protracted Recovery *(check all that apply)*

Concussion History? Y ___ N___	√	**Headache History?** Y ___ N___	√	**Developmental History**	√	**Psychiatric History**
Previous # 1 2 3 4 5 6+		Prior treatment for headache		Learning disabilities		Anxiety
Longest symptom duration Days__ Weeks__ Months__ Years__		History of migraine headache __ Personal __ Family_____		Attention-Deficit/ Hyperactivity Disorder		Depression
						Sleep disorder
If multiple concussions, less force caused reinjury? Yes__ No__		_____		Other developmental disorder_____		Other psychiatric disorder _____

List other comorbid medical disorders or medication usage (e.g., hypothyroid, seizures)_____

_____

D. RED FLAGS for acute emergency management: Refer to the emergency department with sudden onset of any of the following:

*** Headaches that worsen** *** Looks very drowsy/ can't be awakened** *** Can't recognize people or places** *** Neck pain**
*** Seizures** *** Repeated vomiting** *** Increasing confusion or irritability** *** Unusual behavioral change**
*** Focal neurologic signs** *** Slurred speech** *** Weakness or numbness in arms/legs** *** Change in state of consciousness**

E. Diagnosis (ICD): __Concussion w/o LOC 850.0 __Concussion w/ LOC 850.1 __Concussion (Unspecified) 850.9 ___Other (854) _____
__No diagnosis

F. Follow-Up Action Plan **Complete *ACE Care Plan* and provide copy to patient/family.**

___ **No Follow-Up Needed**
___ **Physician/Clinician Office Monitoring**: Date of next follow-up _____
___ **Referral:**
___ Neuropsychological Testing
___ Physician: Neurosurgery____ Neurology____ Sports Medicine____ Physiatrist____ Psychiatrist____ Other_____
___ Emergency Department

ACE Completed by:_____ **MD RN NP PhD ATC**

This form is part of the "Heads Up: Brain Injury in Your Practice" tool kit developed by the Centers for Disease Control and Prevention (CDC).

THE EPWORTH SLEEPINESS SCALE

Patient _____ DOI _____ Today's Date _____

How likely are you to doze off or fall asleep in the following situations, in contrast to feeling just tired? This refers to your usual way of life in recent times. Even if you have not done some of these things recently try to work out how they would have affected you. Use the following scale to choose the most appropriate number for each situation:

0 = no chance of dozing
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 theater 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 traffic	_____

DOCTOR'S ANALYSIS OF SLEEP DISORDER/SOMNOLENCE IMPAIRMENT

Patient _____ DOI _____ Date of Test _____

Total Score _____ out of a possible 24 on Epworth Sleepiness Scale

From the AMA Guides to the Evaluation of Permanent Impairments, 5th Edition, Section 13.3c Arousal & Sleep Disorders, p. 317-318.

Class 1 (1% to 9% Impairment of the Whole Person)

Clinical Criteria: Reduced daytime alertness; sleep pattern such that individual can perform most activities of daily living. (AMA Guides, p. 318: Patient is able to complete most necessary work, but works less efficiently and cannot take on any new special projects. Physical exam is normal, cranial CT exam normal, normal neurologic exam, polysomnogram consistent with obstructive sleep apnea. The only symptom is daytime somnolence. This is a 9% whole person impairment.)

_____ This patient has a Class 1 Sleep Impairment which is _____ % Whole Person

Class 2 (10% to 29% Impairment of the Whole Person)

Clinical Criteria: Reduced daytime alertness; interferes with ability to perform some activities of daily living. (AMA Guides, p. 317 states "A score of 10/24 on the Epworth Sleepiness Scale is equal to excessive sleepiness, or a class 2 impairment.) (AMA Guides, p. 318: Patient had several lapses of awareness while driving. On one occasion she awakened with her car off the road, having no idea what had happened or how she had arrived there. No history of seizures. Physical exam is normal, EEG normal, brain MRI normal, polysomnogram showed marked hypersomnolence. This individual responds partially to stimulants but should not drive a vehicle. 19% WP impairment.)

_____ This patient has a Class 2 Sleep Impairment which is _____ % Whole Person

Class 3 (30% to 69% Impairment of the Whole Person)

Clinical Criteria: Reduced daytime alertness; ability to perform activities of daily living significantly limited. (AMA Guides, p. 318: Patient suffered two work demotions because of declining work performance and poor memory. Morning headache and daytime somnolence, multiple daily episodes of irresistible urge to nap and she must pull off the rod if driving. Naps last 10-15 minutes after which she feels rested. Normal physical exam, normal brain MRI, polysomnogram findings consistent with narcolepsy. This is a 39% whole person impairment)

_____ This patient has a Class 3 Sleep Impairment which is _____ % Whole Person

I recommend Observation MD Consultation

Doctor's Signature _____ Date _____

The Rivermead Post-Concussion Symptoms Questionnaire*

Patient _____ DOI: _____ Today's Date _____

After a head injury or accident some people experience symptoms which can cause worry or nuisance. We would like to know if you now suffer any of the symptoms given below. As many of these symptoms occur normally, we would like you to *compare yourself now with before the accident*. For each one please circle the number closest to your answer.

0=Not experienced at all
1=no more of a problem now than before the accident
2=a mild problem now
3=a moderate problem now
4=a severe problem now

Compared with before the accident, do you now (i.e. over the last 24 hours) suffer from:

Headaches	0	1	2	3	4
Feelings of dizziness	0	1	2	3	4
Nausea and/or vomiting	0	1	2	3	4
Noise sensitivity, or easily upset by loud noise	0	1	2	3	4
Sleep disturbance	0	1	2	3	4
Fatigue, tiring more easily	0	1	2	3	4
Being irritable, easily angered	0	1	2	3	4
Feeling depressed or tearful	0	1	2	3	4
Feeling frustrated or impatient	0	1	2	3	4
Forgetfulness, poor memory	0	1	2	3	4
Poor Concentration	0	1	2	3	4
Taking longer to think	0	1	2	3	4
Blurred Vision	0	1	2	3	4
Light sensitivity, or easily upset or irritated by bright light	0	1	2	3	4
Double Vision	0	1	2	3	4
Restlessness	0	1	2	3	4

Are you experiencing any other difficulties?
Please specify, and rate as above.

1_____	0	1	2	3	4
2._____	0	1	2	3	4

*King, N., Crawford S., Wenden F., Moss, N., and Wade, D. (1995) J. Neurology 242: 587-592

Folstein Mini Mental State Examination

Patient _____ DOI _____ Today's Date _____

Task Instructions	Scoring
Date Orientation: "Tell me the date?" Ask for omitted items. One point each for year, season, date, day of week, and month (5 total points)	___/5
Place Orientation: "Where are you?" Ask for omitted items. One point each for state, county, town, building, and floor or room. (5 total points)	___/5
Register 3 Objects: Name three objects slowly and clearly. Ask the patient to repeat them. One point for each item correctly repeated. (3 total points)	___/3
Serial Sevens: Ask the patient to count backwards from 100 by 7. Stop after five answers. (Or ask them to spell "world" backwards.) One point for each correct answer (or letter.) (5 total points)	___/5
Recall 3 Objects: Ask the patient to recall the objects mentioned above. One point for each item correctly remembered. (3 total points)	___/3
Naming: Point to your watch and ask the patient "what is this?" Repeat with a pencil. One point for each correct answer. (2 total points)	___/2
Repeating a Phrase: Ask the patient to say "no ifs, ands, or buts." One point if successful on first try (1 total point)	___/1
Verbal Commands: Give the patient a plain piece of paper and say "Take this paper in your right hand, fold it in half, and put it on the floor." One point for each correct action (3 total points)	___/3
Written Commands: Show the patient a piece of paper with "CLOSE YOUR EYES" printed on it. One point if the patient's eyes close. (1 total point)	___/1
Writing: Ask the patient to write a sentence. One point if sentence has a subject, a verb, and makes sense. (1 total point)	___/1
Drawing: Ask the patient to copy a pair of intersecting pentagons onto a piece of paper. One point if the figure has ten corners and two intersecting lines (1 total point)	___/1
Total	___/30

Scoring: A score of 24 or above is considered normal. 23 or below is indicative of abnormal cognition.

Adapted from Folstein et al, Mini Mental State, J PSYCH RES 12:196-198 (1975).

DOCTOR'S ANALYSIS OF MENTAL STATE & COGNITION

Patient _____ DOI _____ Date of Test _____

From the Rivermead Post Concussion Symptoms Questionnaire

This patient has Severe Problems (4/4) with the following: _____

_____

This patient has Moderate Problems (3/4) with the following: _____

_____

This patient has Mild Problems (2/4) with the following: _____

_____

From the Folstein Mini Mental State Examination

This patient scored _____ out of 30. A score of 23 or below indicates abnormal cognition.

This patient has Normal / Abnormal mental status and cognition as of this date.

From the AMA Guides to the Evaluation of Permanent Impairment, 5th Edition, p. 319-321

Class 1 (1% to 14% Impairment of the Whole Person)

Clinical Picture: Paroxysmal disorder with pre-impairment exists, but is able to perform activities of daily living.

_____ This patient has a Class 1 _____ % whole person impairment for mental state & cognition.

Class 2 (15% to 29% Impairment of the Whole Person)

Clinical Picture: Impairment required direction of some activities of daily living. (e.g. loss of interest in current events, inability to find his home or location, wandering out of the house, poor short-term memory, inability to balance checkbook, inability to comprehend TV programs or newspapers, inability to calculate, failure to follow through on instructions, disoriented to time, person, and place, can't recall three unrelated words or spell world backward, can identity objects, can copy pentagons, and write a sentence, needs assistance dressing and eating, has articulate speech. This is a 29% whole person impairment.)

_____ This patient has a Class 2 _____ % whole person impairment for mental state & cognition.

I recommend: Observation Neuropsychological Consultation Medical Consultation

Doctor's Signature _____ Date _____