

RAF 4 Serious Injury Assessment
Proposed Criteria For Simplified Assessment Of
Serious Head Injuries – Revision September 2014

1. PREAMBLE

1.1. Revision

1.1.1. A written proposal i.r.o. criteria for simplified assessment of serious head injuries was submitted to PricewaterhouseCoopers obo the RAF in March 2014.

1.1.2. Following review of the draft serious injury list published by the RAF; as well as a meeting at the offices of the RAF on 18 September 2014 with Mr Pieter van der Linde, Ms Estelle Janse van Rensburg, Ms Hilda Kuppan and Ms Vatiswa Ndima-Ngqwetha; and further deliberation on the practicalities of head injury assessment by general practitioners; certain improvements to the original set of proposals have become apparent.

1.1.3. This document, prepared for the RAF, is an amended version of the original, incorporating changes that are intended to make the criteria more practically and reliably applicable by medical practitioners and more readily verifiable by the RAF.

1.2. Introduction

1.2.1. A need has been identified for publication of a list of serious injuries. Injuries on this list should be readily identifiable by medical practitioners who are not specialists in the relevant fields.

1.2.2. In cases that are determined to be serious by this method, it should not be necessary to apply the more time consuming AMA Guides WPI assessment and narrative test report, and it should not be necessary for the matter to be referred for further investigations or specialist assessment.

1.2.3. Neurosurgical proposals have been considered in relation to a list of serious head injuries.

1.3. Relevant and unavoidable realities

1.3.1. The seriousness of head injuries relates principally to the nature and extent of injury to the brain.

1.3.2. The brain consists of soft tissue that can be seriously damaged without any detectable abnormality on x-rays or scans.

1.3.3. Impairments related to brain injuries are abstract as opposed to the more concrete impairments related to musculo-skeletal injuries.

1.3.4. Although more difficult to measure than concrete impairments, abstract impairments are real and can be seriously disabling.

1.3.5. If a list of serious head injuries were to be published in terms of early post-traumatic diagnostic criteria that would always be serious after MMI, the proportion of serious injuries so identified would be very small and would not materially reduce the work or expense in the current system of serious head injury assessment.

1.3.6. The reality is that a number of head injuries that appear to be severe in the beginning end up with good recovery, while a number of head injuries that appear to be mild in the beginning end up with serious permanent disability.

1.4. Rationale, intention and application of the proposed criteria

1.4.1. By adopting a 3-pronged criteria-based approach, as opposed to a simple single criterion list approach, it should be possible to achieve the aim of the exercise.

1.4.1.1. The purpose of criterion A is to determine the presence or absence of a head injury that has the capacity to lead to permanent significant disability. Not all head injuries that meet criteria A will necessarily lead to permanent significant disability as variable and unpredictable rates of improvement are known to occur.

1.4.1.2. The purpose of criterion B is to determine the presence or absence of an unrelated cerebral pathological condition.

1.4.1.2.1. In cases that a head injury marks the onset of neurological impairment and there is no evidence of an unrelated cerebral pathological condition, the post-traumatic neurological impairment is considered to be the result of the head injury.

1.4.1.2.2. On the other hand, in cases of post-traumatic neurological impairment in which there is evidence of a pre-existing or subsequent unrelated cerebral pathological condition, specialist assessment and investigation is required to determine the issues of nexus and apportionment.

1.4.1.3. The purpose of criterion C is to determine the presence or absence of significant permanent disability caused by the head injury.

1.4.2. General practitioners and non-neurological specialist practitioners should be able to understand the criteria and identify their presence or absence.

1.4.2.1. Medical practitioners should employ standard medical diagnostic methods to identify the presence or absence of the criteria.

1.4.2.2. Having had regard to relevant records, information provided by the head injured person, information provided by one or more other persons who have known the head injured person before and since the accident, clinical examination findings and the findings of any relevant investigations, the medical practitioner should be confident and satisfied about the reality or otherwise of the relevant criteria.

1.4.3. Although the criteria are presented in the sequence A, B and C for logical and chronological reasons, it may be more convenient and less time-consuming for the assessment to be performed in reverse order, i.e. first assess C; proceed to assessment of B only if C is true; proceed to assessment A only if C and B are true.

1.4.3.1. The determination of criterion A is usually more complex and time-consuming than assessment of criteria B or C.

1.4.3.2. If there is no report or clinical evidence of post-traumatic neurological disability (i.e. criterion C not true) it is not necessary to determine the presence or absence of a significant head injury (criterion A) and nor is it necessary to determine the presence or absence of an unrelated cerebral pathological condition (criterion B), as the head injury can in any event not be regarded as serious.

1.4.3.3. If there is evidence of post-traumatic neurological disability (criterion C true) and there is also evidence of an unrelated cerebral pathological condition (criterion B not true), it is not necessary to determine the presence or absence of a significant head injury (criterion A) for the purpose of this simplified assessment method as the matter will in any event need to be referred for specialist assessment for considerations of nexus and apportionment.

1.4.3.4. If there is evidence of post-traumatic neurological disability (criterion C true) and there is no evidence of any unrelated cerebral pathological condition (criterion B true) it is necessary to determine the presence or absence of a significant head injury (criterion A).

1.4.3.5. Note that only one of the criteria A.2.a to A.2.g is needed to satisfy A.2. In other words if any one of A.2.a to A.2.g is found to be true it is not necessary to spend time investigating the rest.

1.4.4. It is recognised that medical practitioners have different levels of experience and confidence in relation to the assessment of head injuries, and that certain of the criteria are easier to determine while others are more difficult.

1.4.4.1. The key to the application of these criteria is that “using standard medical diagnostic methods” the medical practitioner should be “confident and satisfied about the reality or otherwise of the relevant criteria”.

- 1.4.4.2. The level of confidence of the assessing medical practitioner will be influenced by : -
- 1.4.4.2.1. the presence or absence of relevant observations recorded in hospital records;
 - 1.4.4.2.2. the presence or absence of documented radiological findings;
 - 1.4.4.2.3. the contents of pre-accident and post-accident school- and/or employment records;
 - 1.4.4.2.4. the presence or absence of eyewitness accounts;
 - 1.4.4.2.5. the credibility, congruence and consistency or otherwise of facts reported in consultation; and
 - 1.4.4.2.6. the medical practitioner's objective observations during the interview and examination.
- 1.4.4.3. Unfortunately hospital records generally record certain relevant observations but fail to record others, and at times fail to record any neurological observations.
- 1.4.4.4. CT scan reports and x-ray reports of skull and facial bones are very valuable when available, but are often not available when they should have been performed.
- 1.4.4.5. Eyewitness accounts are often not available.
- 1.4.4.6. School records and employment records provide relevant information in certain cases but unfortunately fail to provide relevant information in other cases.

1.4.4.7. In cases where relevant information is readily evident in the medical/nursing records, radiology reports, eyewitness accounts and/or school/employment records, it is easier to reach confidence and satisfaction about the reality or otherwise of the relevant criteria.

1.4.4.8. In cases that reliance needs to be placed on the credibility, congruence and consistency or otherwise of facts reported in consultation, the criteria are more difficult to determine and it is more difficult to reach confidence and satisfaction about the reality or otherwise of the relevant criteria.

1.4.4.9. In cases that the medical practitioner is confident and satisfied that each one of A, B and C criteria are true, he or she should certify the head injury as serious according to the simplified assessment method.

1.4.4.10. In all other cases he or she should indicate that the injury cannot be certified as serious according to the simplified assessment method. In these cases any one or more of the following should be undertaken or recommended : -

1.4.4.10.1. The assessing medical practitioner may perform an AMA Guides WPI assessment and complete the statutory RAF4 report.

1.4.4.10.2. The assessing medical practitioner may supplement the RAF 4 report with a narrative test report.

1.4.4.10.3. Referral for specialist assessment and investigation may be recommended.

**REQUIREMENTS FOR CERTIFICATION OF SERIOUS HEAD INJURY BY
THE SIMPLIFIED ASSESSMENT METHOD**

SERIOUS HEAD INJURY = A + B + C (ALL 3 MUST BE TRUE)

- A. Significant Head Injury; and**
- B. Absence Of Any Unrelated Cerebral Pathological Condition; and**
- C. Significant Disability Related To Persistent Post-Traumatic Cerebral Neurological Impairment.**

INDIVIDUAL CRITERIA FOR A, B AND C

A. Significant Head Injury = 1 + 2 (Both must be true)

1. Head injury, as evidenced by blow to the head/face or fracture of skull/facial bones; and
2. Potentially serious brain injury, as evidenced by any one of a or b or c or d or e or f or g - at least one must be true. (The relevant criterion should be confirmed by a copy of the contemporaneous record reflecting the relevant observation.)
 - a. Loss of consciousness for > 20 minutes; or
 - b. GCS 12/15 or lower; or
 - c. Depressed level of consciousness for > 24 hours (e.g. GCS <15/15, confusion; drowsiness; impaired responsiveness) not due to sedative drugs; or
 - d. Deteriorating level of consciousness not due to sedative drugs;
or

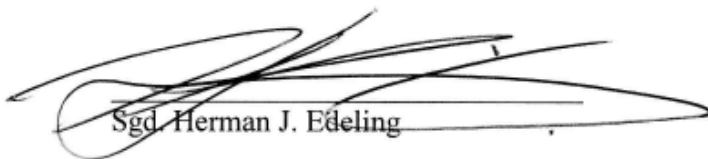
- e. Focal neurological deficits; or
- f. CT brain scan evidence of contusion, haemorrhage or mass effect; or
- g. Onset of recurrent seizures following the accident.

B. Absence Of Any Unrelated Cerebral Pathological Condition (Must be true)

- 1. There is no evidence in documentation or history of pre-accident or post-accident unrelated cerebral pathological condition (e.g. another head injury, cerebral palsy, stroke, brain tumour, brain operation, intracranial infection, encephalopathy, delirium or dementia).

C. Significant Disability Related To Persistent Post-Traumatic Cerebral Neurological Impairment = 1 + 2 (Both must be true)

- 1. Cerebral neurological impairment (mental, behavioural and/or neurophysical) has persisted since the accident without recovery.
- 2. There is evidence of ongoing significant loss of learning capacity and/or ongoing significant loss of employment capacity that is directly related to the post-traumatic neurological impairment. (The post-accident change in performance should be confirmed in a letter from the school or employer).


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18 September 2014