

# NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

## SCOPE

### 1 Guideline title

Triage, assessment, investigation and early management of head injury in infants, children and adults.

#### 1.1 *Short title*

Head injury.

### 2 The remit

This is a partial update of '[Head injury](#)' (NICE clinical guideline 56). See section 4.3.1 for details of which sections will be updated. We will also carry out an editorial review of all recommendations to ensure that they comply with NICE's duties under equalities legislation.

This update is being undertaken as part of the guideline review cycle.

This is an update of '[Head injury](#)', NICE clinical guideline 56 (2007), available from [www.nice.org.uk/guidance/CG56](http://www.nice.org.uk/guidance/CG56). See section 3.3.1 for details of which sections will be updated. We will also carry out an editorial review of all recommendations to ensure that they comply with NICE's duties under equalities legislation.

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### 3 Clinical need for the guideline

#### 3.1 *Epidemiology*

- a) 'Head injury' for the purposes of the guideline is defined as any trauma to the head, other than superficial injuries to the face.

- b) Each year 1.4 million people attend hospitals in England and Wales with a recent head injury. Between 33 and 50% of these are children under 15 years of age. The majority, around 80%, are diagnosed with 'mild' head injury and do not require hospital admission.
- c) Annually, around 200,000 people are admitted to hospital with head injury. Of these, one fifth have features suggesting that their injury may have been sufficient to cause a skull fracture, or have evidence of brain damage. Approximately 2% of children with head injuries and 7% of adults with head injuries experience impaired consciousness and around 4000 patients a year undergo a neurosurgical operation for an intracranial complication. Most patients recover without specific or specialist intervention but in others, long-term disability or even death result from the effects of complications, which can potentially be minimised or avoided with early detection and appropriate treatment.

### **3.2 Current practice**

- a) Hospital Episode Statistics data for the 2005/2006 annual dataset indicate that 463 patients in England underwent an operation to drain the extradural space (OPCS code A40) and 2651 patients underwent an operation to drain the subdural space (OPCS code A41). These figures do not include a small number of other neurosurgical procedures possible after head injury, and include some patients with a non-head-injury diagnosis.
- b) Although the incidence of head injury is high, the incidence of death from head injury is low (6-10 per 100,000 population per annum). As few as 0.2% of all patients attending emergency departments with a head injury will die as a result of this injury. Ninety five per cent of all people who have sustained a head injury will present with a minor or mild injury (Glasgow Coma Scale [GCS] greater than 12) but the majority of fatal outcomes will be in the moderate (GCS of 9 to 12) or severe (GCS less than or equal to 8) head

injury groups which account for only 5% of attenders. Therefore emergency departments see a large number of patients with a minor or mild head injury, and need to identify the very small number of these that will go on to have serious acute intracranial complications.

- c) The previous head injury guidelines produced by NICE in 2003 and 2007 resulted in computed tomography (CT) scanning replacing skull radiography as the primary imaging modality for assessment of head injury, and an increasing proportion of people with head injury being managed in specialist centres. This has been associated with a decline in fatality in severe head injury patients.
- d) Much of the remaining controversy and uncertainty in the early care of people with head injury is focused upon how certain groups of patients, such as those on anticoagulants and those with a significant but non-surgical traumatic brain injury, are best managed within the evolving NHS trauma systems.

## **4 The guideline**

### **4.1 *Population***

#### **4.1.1 Groups that will be covered**

- a) All adults, young people and children, including those aged 15 and under and infants under 1 year, who present with a suspected or confirmed head injury with or without other major trauma.
- b) Patients with a suspected or confirmed head injury who may be unaware that they have sustained a head injury and may be overlooked, for example because of intoxication or vulnerable groups with cognitive impairment.

#### **4.1.2 Groups that will not be covered**

- a) People with other traumatic injury to the head that are outside of the current definition of head injury in section 3.1, including people with superficial injuries to the eye or face.

#### **4.2 *Healthcare settings***

- a) Primary care, pre-hospital, in emergency departments (or similar units), tertiary care, existing inpatients or those in residential care homes where NHS care is delivered.

#### **4.3 *Management***

##### **4.3.1 Key issues that will be covered**

###### **Pre-hospital assessment, advice and referral to hospital:**

- a) Selection of patients with head injury, with or without cervical spine injury, for specialist neuroscience care using clinical prediction rules.

###### **Assessment in the emergency department:**

- b) Selection of patients with head injury:
  - with or without cervical spine injury for imaging using clinical prediction rules.
  - for imaging who have no history of amnesia or loss of consciousness who are on anticoagulant or anti-platelet therapy.
- c) Diagnosis of concomitant cervical spine injury in patients with head injury, using CT and magnetic resonance imaging scans.

###### **Discharge and follow-up**

- d) Information for patients and carers on discharge from the emergency department or observation ward.

##### **4.3.2 Key issues that will not be covered**

- a) Rehabilitation or long-term care of patients with a head injury.

- b) Areas addressed in the 2007 guideline that will not be reviewed:
- Pre-hospital assessment, advice and referral to hospital (excluding issues in 4.3.1 a)
  - Immediate management at the scene and transport to hospital  
Involvement of the neurosurgical department (excluding issues in 4.3.1 b)
  - Discharge and follow-up (excluding issues in 4.3.1 d)
  - Admission and observation
  - Medical radiation

#### **4.4 Main outcomes**

- a) Diagnostic accuracy
- b) Fatality at 30 days
- c) All-cause mortality at 30 days
- d) Objective measures of disability (including Glasgow Outcome Scale, King's Outcome Scale for Childhood Head Injury and Cerebral Performance Category scale)
- e) Quality of life (validated quality of life scores only)
- f) Length of hospital stay

#### **4.5 Economic aspects**

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions. A review of the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY), and the costs considered will usually be only from an NHS and personal social services (PSS) perspective. Further detail on the methods can be found in 'The guidelines manual' (see 'Further information').

## **4.6 Status**

### **4.6.1 Scope**

This is the consultation draft of the scope. The consultation dates are 2 March to 30 March 2012.

### **4.6.2 Timings**

The development of the guideline recommendations will begin in May 2012.

## **5 Related NICE guidance**

### **5.1 Published guidance**

#### **5.1.1 NICE guidance to be updated**

This guideline will update and replace the following NICE guidance:

- [Head Injury](#). NICE clinical guideline 56 (2007).

#### **5.1.2 Other related NICE guidance**

##### **Published**

- [Patient experience in adult NHS services](#). NICE clinical guideline 138 (2012)
- [The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care](#). NICE clinical guideline 137 (2012).
- [Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence](#). NICE clinical guideline 115 (2011).
- [Service user experience in adult mental health](#). NICE clinical guideline 136 (2011).
- [Delirium: diagnosis, prevention and management](#). NICE clinical guideline 103 (2010).
- [Transient loss of consciousness in adults and young people](#). NICE clinical guideline 109 (2010).

- [Sedation in children and young people: Sedation for diagnostic and therapeutic procedures in children and young people](#). NICE clinical guideline 112 (2010).
- [Strategies to prevent unintentional injuries among children and young people aged under 15](#). NICE public health guidance 29 (2010).
- [When to suspect child maltreatment](#). NICE clinical guideline 89 (2009).
- [Medicines adherence](#). NICE clinical guideline 76 (2009).
- [Acutely ill patients in hospital](#). NICE clinical guideline 50 (2007).
- [Dementia: Supporting people with dementia and their carers in health and social care](#). NICE clinical guideline 42 (2006).
- [Post-traumatic stress disorder \(PTSD\): The management of PTSD in adults and children in primary and secondary care](#). NICE clinical guideline 26 (2005).
- [Falls: The assessment and prevention of falls in older people](#). NICE clinical guideline 21 (2004).
- [Pre-hospital initiation of fluid replacement therapy in trauma](#). NICE technology appraisal guidance 74 (2004).

## **5.2 Guidance under development**

NICE is currently developing the following related guidance (details available from the NICE website):

- Intravenous fluid therapy in hospitalised adult patients. Publication date TBC.

## **6 Further information**

Information on the guideline development process is provided in:

- [‘How NICE clinical guidelines are developed: an overview for stakeholders the public and the NHS’](#)
- [‘The guidelines manual’](#).

Information on the progress of the guideline will also be available from the [NICE website](#).

