NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

SCOPE

1 Guideline title

Spinal injury assessment: assessment and imaging for spinal injury

1.1 Short title

Spinal injury assessment

2 The remit

The Department of Health has asked NICE: 'To produce guidance on the assessment and imaging of patients at high risk of spinal injury.'

NICE is developing 5 pieces of guidance relating to trauma, with expected publication dates in June and October 2015 (to be confirmed). Each piece of guidance will focus on a different aspect of trauma care.

- Complex fractures: assessment and management of complex fractures (including pelvic fractures and open fractures of limbs)
- Fractures: diagnosis, management and follow up of fractures (excluding head and hip, pelvis, open and spinal)
- Major trauma: assessment and management of major trauma including resuscitation following major blood loss with trauma
- Spinal injury assessment: assessment and imaging of patients at high risk of spinal injury
- Trauma services: service delivery of trauma services

NICE has commissioned the National Clinical Guideline Centre (NCGC) to develop the trauma guidance. The fractures, complex fractures, spinal injury assessment and major trauma guidelines will start development approximately 6 months before the development of the trauma service delivery guideline.

3 Clinical need for guidance

3.1 Epidemiology

a) Spinal injury involves traumatic fracture or derangement of the spinal column, sometimes leading to spinal cord injury. If spinal cord injury occurs, careful immobilisation is of even greater importance. Occasionally spinal cord injury may occur in the absence of overt spinal column damage.

b) The main causes of spinal injury are road traffic accidents, falls, violent attacks and sporting injuries. Although spinal injury affects all ages, young men and older women tend to be the populations at highest risk. Half of all spinal injuries affect the cervical spine.

c) Approximately 600–700 people sustain acute traumatic injuries to the spinal cord each year in the UK. Worldwide incidence has been estimated between 10.4 and 59 injuries per million people per year. Such injuries often lead to serious neurological damage, causing paraplegia, quadriplegia or death.

3.2 Current practice

a) Initial assessment is a triage procedure carried out by pre-hospital care staff to establish the existence or likely existence of a spinal injury, as well as the severity and range of traumatic injuries found. All patients with major injuries, whether or not they include spinal injuries, should be taken to the local trauma unit or centre, usually by emergency services.

b) Although the need for immobilisation is universal, there are differences in the mode of immobilisation of patients with suspected spinal injuries. There is no clear single best method or clinical working practice identified.

c) If the patient has been sent to a local trauma centre or trauma unit, treating consultants are expected to contact the on-call consultant in a linked spinal injury centre.

d) Once in the trauma centre, trauma unit or spinal injury centre, appropriate spinal imaging and assessment is needed and should be reviewed by a consultant in radiology.

e) After the acute stage, later assessment of disabilities and need for rehabilitation should occur, as it is a critical part of maximising recovery from spinal injury.

f) The patterns of referral to spinal injury centres are inconsistent, with only 7% of cases referred within 1 day of injury, and 52% being admitted within 1 month. Such delays may lead to complications and longer hospital stays. These delays may be partially due to inefficient or inaccurate methods of assessment.

4 The guideline

The guideline development process is described in detail on the NICE website (see section 6, ‘Further information’).

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.

The areas that will be addressed by the guideline are described in the following sections.

4.1 Population

4.1.1 Groups that will be covered

All adults, young people and children who present with suspected spinal injury.

4.1.2 Groups that will not be covered

Non-traumatic spinal injury or spinal cord injury resulting from disease.

4.2 Healthcare setting

All settings in which NHS care is received or commissioned.

4.3 Clinical management

4.3.1 Key clinical issues that will be covered

a) Initial triage by pre-hospital care staff:

- primary survey assessment for spinal injury with specific risk tools
- methods to stabilise spine and transfer patient
- determining the immediate destination of patient.

b) Acute-stage clinical assessment:

- primary survey assessment for spinal injury
- airway assessment after spinal stabilisation
- need for immediate medical intervention (such as anti-inflammatories, antioxidants, and anti-excitotoxins).

c) Acute-stage imaging assessment and effectiveness of different imaging modalities, such as:

- X-ray
- CT
- MRI.

Further imaging assessment in people who may have clinical signs of spinal injury, but who have a normal result on initial imaging.

d) Skill levels and training of the assessing clinician.

e) Documentation for patients with spinal injury.

4.3.2 Clinical issues that will not be covered

a) Prevention and treatment of traumatic spinal injury.

4.4 Main outcomes

a) Adverse effects associated with assessment, imaging, stabilisation and transfer to spinal unit.

b) Diagnostic accuracy (sensitivity and specificity).

c) Complications of poor handling, poor resuscitation and delayed bony stabilisation.

d) Functional scales that quantify level of disability, such as the Expanded Disability Status Scale (EDSS).

e) Health-related quality of life.

f) Morbidity.

g) Mortality.

h) Patient-reported outcomes.

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 a draft scope. The consultation dates are 28th February to 28th March 2013.

4.6.2 Timing

The development of the guideline recommendations will begin in June 2013.

5 Related NICE guidance

5.1 Published guidance

- Patient experience in adult NHS services. NICE clinical guideline 138 (2012).
- Head injury. NICE clinical guideline 56 (2007).

5.2 Guidance under development

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

- Head injury. NICE clinical guideline. Publication expected January 2014.
- Fractures. NICE clinical guideline. Publication expected June 2015.
- Complex fractures. NICE clinical guideline. Publication expected June 2015.
- Major trauma. NICE clinical guideline. Publication expected June 2015.
- Trauma services. NICE clinical guideline. Publication expected October 2015.

6 Further information

Information on the guideline development process is provided in the following documents, available from the NICE website:

- 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.