NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

SCOPE

1 Guideline title

Major trauma: assessment and management of major trauma

1.1 Short title

Major trauma

2 The remit

The Department of Health has asked NICE: 'To produce a clinical guideline on the assessment and management of major trauma including resuscitation following major blood loss associated with trauma.'

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 the guideline

3.1 Epidemiology

a) Injury is a leading cause of death and disability worldwide. In the UK, there are approximately 15,000 deaths a year from accidents. One third of these are caused by road traffic accidents. Almost 100 people per week die in road accidents. For every death, 2 people suffer permanent disability.

b) The early identification of life threatening conditions and appropriate rapid interventions can be lifesaving. Good early interventions for all injuries speeds recovery, prevents complications and allows an earlier return to active life. However, late identification of injuries (both major and minor), inadequate investigation and imaging of such injuries and late or poor treatment substantially increases both mortality and morbidity.

3.2 Current practice

a) According to a February 2010 report from the National Audit Office:

‘There is unacceptable variation in major trauma care in England depending upon where and when people are treated. Care for patients who have suffered major trauma, for example following a road accident or a fall, has not significantly improved in the past 20 years despite numerous reports identifying poor practice, and services are not being delivered efficiently or effectively.

b) Survival rates vary significantly from hospital to hospital, with between 5 unexpected survivors and 8 unexpected deaths per 100 trauma patients, reflecting the variable quality of care. The National Audit Office estimates that 450 to 600 lives could be saved each

year in England if major trauma care were managed more effectively.

c) For best outcomes care should be led by consultants experienced in major trauma, but major trauma is most likely to occur at night and at weekends, when consultants are not normally in the emergency department. A very small minority of hospitals have 24-hour consultant cover, 7 days a week.

d) Major trauma care is not coordinated and there are no formal arrangements for taking patients directly for specialist treatment or transferring them between hospitals. CT scanning is very important for major trauma patients; however, a significant number of patients that need a scan do not receive one.

e) Access to rehabilitation services, which can improve patients' recovery, quality of life and reduce the length of hospital stay, varies across the country and patients do not always receive the care that they need.

f) The costs of major trauma care are not well understood. The estimated annual lost economic output from deaths and serious injuries from major trauma is between £3.3 billion and £3.7 billion. Collecting information on care is essential for monitoring and improving services, but only 60% of hospitals delivering major trauma care contribute to the Trauma Audit and Research Network (TARN). The performance of the 40% of hospitals that do not submit data to TARN cannot therefore be measured.

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

Adults, young people and children suspected of major blood loss following trauma.

4.1.2 Groups that will not be covered

Management of people with burns.

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) Airway

- definitive airway control (intubation [drug assisted]) vs. simple super-glottis devices vs. no intervention
- role of rapid sequence induction

b) Breathing

- recognition and treatment of tension pneumothorax
- thoracocentesis
- chest tube placement
- imaging assessment (including choice and timing of imaging modality and imaging parameters) such as,
  - X-ray

- CT
- MRI
- vascular imaging
- focused assessment with sonography.

c) Circulation:

- Catastrophic haemorrhage (such as assessment for blood loss and temporary control of bleeding).
- control of external haemorrhage: pneumatic compared with mechanical tourniquets.
- control of uncompressible haemorrhage
- Hypotensive resuscitation compared with fluid resuscitation (such as choice and volume of fluids).
- Access: intravenous and intraosseous
- Monitoring and mandatory blood tests (including laboratory parameters)

d) Disability

- extent of neurological examination (i.e. Glasgow coma scale vs. local scales)

e) Skill levels and training of the assessing clinician.

f) Documentation for patients with major trauma.

4.3.2 Clinical issues that will not be covered

a) Prevention and follow-up of major trauma.

b) Major trauma resulting from burns.

c) IVF therapy: crystalloids and colloids.

4.4 Main outcomes

a) Adverse effects associated with assessment and management of major blood loss following trauma.

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

c) Health-related quality of life.

d) Duration of contact with a healthcare professional and continuity of contact.

e) Morbidity.

f) Mortality.

g) Patient-reported outcomes.

h) Time to operating theatre (surrogate outcome).

i) Time to definitive control of haemorrhage.

4.5 Economic aspects

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions or strategies. 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).
- Venous thromboembolism: reducing the risk. NICE clinical guideline 92 (2010)
- Pre-hospital initiation of fluid replacement therapy in trauma. NICE technology appraisal 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 children. NICE clinical guideline. Publication expected November 2015.
- Intravenous fluid therapy. NICE clinical guideline. Publication expected November 2013.
- Transfusion. NICE clinical guideline. Publication expected May 2015.
- Head injury. NICE clinical guideline. Publication expected January 2014.
- Spinal injury assessment. NICE clinical guideline. Publication expected May 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.