

Assessment and treatment of mild brain injury

Worldwide, the incidence rates for MTBI are between 100-300 per 100,000 population with mild injuries accounting for between 70-90% of all TBIs.

Definition of mild, moderate and severe brain injury by Glasgow Coma Score (GCS)

Degree of brain injury	GCS
Mild	13-15
Moderate	9-12
Severe	8 or less

B The diagnosis of mild traumatic brain injury should be made according to WHO task force operational criteria, subject to clinical judgement when complicating factors are present, eg skull fracture, seizures, or a haematoma.

B Patients presenting with non-specific symptoms following mild traumatic brain injury should be reassured that the symptoms are benign and likely to settle within three months.

✓ Consideration should be given to alternate diagnostic explanations for ongoing symptoms post MTBI, eg coincidental mood disorder or thyroid disease, and further investigation may be warranted. Other secondary pathologies which are consequences of the original injury but not associated with, or dependent on, any brain injury may occur in the context of a head injury, eg benign positional paroxysmal vertigo, and should be treated accordingly.

B Referral for cognitive (psychometric) assessment is not routinely recommended after MTBI.

✓ If a cognitive assessment has been conducted clinicians should be aware that false positives can occur and that results may be unreliable in the absence of effort testing.

D Assessment and consideration of pre-existing health variables such as previous neurological disorders and substance misuse should be carried out for all patients with MTBI.

C Referral for cognitive behavioural therapy following MTBI may be considered in patients with persistent symptoms who fail to respond to reassurance and encouragement from a general practitioner after three months.

Physical rehabilitation and management

B Repetitive task-oriented activities are recommended for improving functional ability, such as sit-to-stand or fine motor control.

C Casts, splints and passive stretching may be considered in cases where contracture and deformity are progressive.

B Botulinum Neurotoxin Therapy (BoNT) may be considered to reduce tone and deformity in patients with focal spasticity.

✓ Full assessment of bladder and bowel function should be undertaken over a period of days following admission. The physical, cognitive and emotional function of the patient should be considered and the multidisciplinary team should be involved to plan an individualised approach.

Cognitive rehabilitation

D Patients with memory impairment after TBI should be trained in the use of compensatory memory strategies with a clear focus on improving everyday functioning rather than underlying memory impairment.

- For patients with mild-moderate memory impairment both external aids and internal strategies (eg use of visual imagery) may be used.
- For those with severe memory impairment external compensations with a clear focus on functional activities is recommended.

B Learning techniques that reduce the likelihood of errors being made during the learning of specific information should be considered for people with moderate-severe memory impairment.

C Patients with attention impairment in the post-acute phase after TBI should be given strategy training relating to the management of attention problems in personally relevant functional situations.

B Patients with TBI and deficits in executive functioning should be trained in meta-cognitive strategies relating to the management of difficulties with planning, problem solving and goal management in personally relevant functional situations.

D In the post-acute setting interventions for cognitive deficits should be applied in the context of a comprehensive/holistic neuropsychological rehabilitation programme. This would involve an interdisciplinary team using a goal-focused programme which has the capacity to address cognitive, emotional and behavioural difficulties with the aim of improving functioning in meaningful everyday activities.

Rehabilitation of behavioural and emotional disorders

✓ After acquired brain injury medically remediable causes of agitation should be excluded before therapies are started. Therapies should take account not just of the nature of the brain injury but the characteristics of the individual affected and the potential adverse effects of treatment.

✓ The family and key members of the affected individual's social network should be provided with education about appropriate management of behaviour and emotion.

B Propranolol or pindolol may be considered as a first line treatment option for moderate levels of agitation/aggression.

✓ Drug treatments should be individually tailored and commenced in very low doses. The patient's progress should be monitored with surveillance for possible adverse effects.

B Cognitive behavioural therapy should be considered for the treatment of acute stress disorder following mild TBI.

B Cognitive behavioural therapy should be considered for the treatment of anxiety symptoms following mild to moderate TBI, as part of a broader neurorehabilitation programme.

Communication and swallowing

D Patients with communication deficits post TBI should be referred to speech and language therapy for assessment and management of their communication impairments.

Vocational rehabilitation

✓ Early in the rehabilitation pathway patients should be asked about vocational activities and liaison initiated with employers. Once work requirements are established patients should have appropriate assessments made of their ability to meet the needs of their current or potential employment.

Management of the patient in the minimally conscious or vegetative state

B The Coma Recovery Scale - Revised should be used to assess patients in states of disordered consciousness.

B Amantadine may be considered as a means of facilitating recovery of consciousness in patients following severe brain injury.

Service delivery

B For optimal outcomes, higher intensity rehabilitation featuring early intervention should be delivered by specialist multidisciplinary teams.

✓ Community rehabilitation services for patients with brain injuries should include a wide range of disciplines working within a coordinated interdisciplinary model/framework and direct access to generic services through patient pathways.

✓ Family and carers should be provided with access to ongoing support when the patient with brain injury is living within the community.

✓ Where further rehabilitation is indicated for patients with brain injury who are discharged from inpatient care, it may be offered by telephone or face-to-face methods to alleviate long term burdens due to depression, behavioural and cognitive consequences.

✓ The pre-discharge process should involve the patient and carer(s), primary care team, social services and allied health professionals as appropriate. It should take account of the domestic circumstances of the patient or, if the patient lives in residential or sheltered care, the facilities available there.

D Planned discharge from inpatient rehabilitation to home for patients who have experienced an ABI provides beneficial outcomes and should be an integrated part of treatment programmes.

✓ At the time of discharge, the discharge document should be sent to all the relevant agencies and teams.

Sources of further information

National organisations providing support for patients

Brain and Spine Foundation

3.36 Canterbury Court, Kennington Park, 1-3 Brixton Road, London SW9 6DE
Tel: 020 7793 5900 • Fax: 020 7793 5939
www.brainandspine.org.uk • Email: info@brainandspine.org.uk

Brain and Spine Helpline: 0808 808 1000
Email: helpline@brainandspine.org.uk

The Brain and Spine Foundation develops research, education and information programmes aimed at improving the prevention, treatment and care of people affected by disorders of the brain and spine.

Headway - The Brain Injury Association

Scotland Office, Astley Ainslie Hospital, Canaan Lane, Edinburgh EH9 2HL
Tel: 0131 537 9116 • Helpline: 0808 800 2244
www.headway.org.uk • Email: office@edinburgh.org.uk

Health and Social Care Alliance Scotland

Venlaw Building, 349 Bath Street, Glasgow G2 4AA
Tel: 0141 404 0231 • Fax: 0141 246 0348
www.alliance-scotland.org.uk • Email: info@alliance-scotland.org.uk

Health and Social Care Alliance Scotland represents the two million people who live with long term conditions in Scotland. It has members drawn from over 250 organisations and works as a conduit between these groups, the people they represent and key stakeholders across government and statutory services.

National Managed Clinical Network for Acquired Brain Injury

NMCN Team, Waverley Gate, 2 - 4 Waterloo Place, Edinburgh, EH1 3EG
Tel: 0131 465 5574
www.sabin.scot.nhs.uk • Email: susan.whyte@nhslothian.scot.nhs.uk

The National Managed Clinical Network for Acquired Brain Injury is a Scottish national network. Its aim is to improve access to and the quality of services for children and adults with acquired brain injury.

Momentum Head Office

Pavilion 7, Watermark Park, 325 Govan Road, Glasgow, G51 2SE
Tel: 0141 419 5299 • Fax: 0141 419 0821
www.momentumsotland.org • Email: headoffice@momentum.org

Momentum is a voluntary organisation offering a range of support and rehabilitation programmes to those who have had a head injury.

Scottish Head Injury Forum

SHIF, c/o Charles Bell Pavilion, Astley Ainslie Hospital, 133 Grange Loan, Edinburgh EH9 2HL
www.shif.org.uk • Email: scottishshif@aol.co.uk

Scottish National Disability Information Service

UPDATE, Hays Community Business Centre, 4 Hay Avenue, Edinburgh, EH16 4AQ
Tel: 0131 669 1600
www.update.org.uk • Email: info@update.org.uk

Range of disability information from commonly asked questions through to equipment information, holiday information and local sources of help and advice.

National organisations providing support for carers and families

Carers Scotland

The Cottage, 21 Pearce Street, Glasgow, G51 3UT
Tel: 0141 445 3070
www.carersuk.org/scotland

Carers Scotland provides information and advice to carers on all aspects of caring.

Contact a family – Scotland

Craigmillar Social Enterprise and Arts Centre, 11/9 Harewood Road, Edinburgh, EH16 4NT
Tel: 0131 659 2930
Helpline: 0808 808 3555 • Textphone: 0808 808 3556
Email: helpline@cafamily.org.uk
www.cafamily.org.uk • Email: scotland.office@cafamily.org.uk

Contact a Family is a charity which provides support, information and advice to families of children and young people with a disability or health condition.

Crossroads Caring Scotland

24 George Square, Glasgow, G2 1EG
Tel: 0141 226 3793
www.crossroads-scotland.co.uk

Princess Royal Trust for Carers in Scotland

Charles Oakley House, 125 West Regent Street, Glasgow G2 2SD
Tel: 0141 221 5066 • Fax: 0141 221 4623
www.carers.org • Email: info@carers.org

This Quick Reference Guide provides a summary of the main recommendations in **SIGN 130 Brain injury rehabilitation in adults**. Recommendations are graded **A B C D** to indicate the strength of the supporting evidence.

Good practice points ✓ are provided where the guideline development group wishes to highlight specific aspects of accepted clinical practice.

Details of the evidence supporting these recommendations can be found in the full guideline, available on the SIGN website: www.sign.ac.uk.

This Quick Reference Guide is also available as part of the SIGN Guidelines app.

