

NMTRG Guidelines for the assessment and rehabilitation of the Vertebral Column Injury Major Trauma patient

Discipline: Occupational Therapy and Physiotherapy

Guideline 1: Management of vertebral column fractures

The Occupational Therapist / Physiotherapist should have knowledge of the following;

- Anatomy and physiology of spine
- Myotomes and Dermatomes
- Fracture types
- Fracture stability grading systems
- Factors influencing injury and stability of a fracture e.g, MOI
- Common surgical Interventions
- Protective therapeutic and moving and handling skills and techniques for patients with spinal injuries
- Additional clarity of management where non-weight bearing is required for lower limbs
- Working knowledge of spinal orthoses, use and their function
- Common complications associated with vertebral column fractures
- Chest Physiotherapy
- Awareness of any post-op advice to protect metalwork. Also
- Awareness of relevant comorbidity such as structural deformities influencing stability of fracture and management plans

The Occupational Therapist / Physiotherapist should be able to recognise;

- New onset or worsening adverse neurology
- Recognise symptoms of SCI, immediate management and how to escalate (please see SCI guideline for assessment and management)
- Multi system deterioration and or risks- skin, chest, UTI, sub optimal nutrition
- Symptoms of brachial plexus injury
- Symptoms of lumbar plexus injury
- Symptoms of autonomic dysreflexia
- The local escalation protocol for worsening neurology
- Risk of pressure damage (immobility/orthotics/Vac/frames)

The Occupational Therapist / Physiotherapist should be able to offer the following interventions

- Chest Physiotherapy Assessment, Treatment and Management.
- Pre and post treatment assessment of myotomes and dermatomes
- Strict 5 person Log rolling with/without head hold
- Donn and Doff spinal orthosis, teaching patient and or family/carers
- Therapeutic moving and handling- amended log roll/ patient independent moving and handling
- Mobility assessment, provision of walking aids and progression considering multiple injuries
- Functional assessment
- Postural advice
- Core stability exercise programme
- Rehabilitation Prescription provision

- Equipment provision

The Occupational Therapist / Physiotherapist is expected to complete this assessment and intervention;

- Early in the patients admission inclusive of ICU and HDU assessment / intervention
- As part of a 7 day service inclusive of ICU and HDU weekend cover
- And record it appropriately on the Rehabilitation Prescription

The Occupational Therapist / Physiotherapist should have knowledge of additional services including;

- Physiotherapy Community (domiciliary/hydrotherapy/ out-patients)
- Occupational Therapy in-patient and community service for Assessment, intervention, provision of equipment to improve function and discharge planning
- Dietitian in-patient and community services
- Falls Prevention Team
- Community/ Out-patient Orthotics service
- Community/ District nursing for pressure care/assessment
- Continence nurse as required for new onset of bladder and bowel symptoms
- Package of care on discharge
- Psychology input as inpatient and after discharge
- You Tube videos with brace care, donn and doffing advice and fitting advice
- Citizens advice
- Trust approved independent legal advice.

The Occupational Therapist / Physiotherapist understands how to access the following pathways

- Onward outpatient therapy input
- Splint / Bracing clinic
- Falls prevention
- Help at home on discharge

If required the patient has access to;

- Rapid access rehabilitation
- Vocational rehabilitation
- Instant community rehabilitation
- Follow up in an MDT clinic
- Complex MSK rehabilitation
- Educational intervention
- Timely access to Mental health services

Consideration for long term rehabilitation

- Links with preventative teams
- Use of risk stratification tools (e.g. STarT Back)
- Patient support groups / group rehabilitation

References and Further Reading

Spinal Injuries Association- MOVING AND HANDLING PATIENTS WITH ACTUAL OR SUSPECTED SPINAL CORD INJURIES (SCI) Produced by the Spinal Cord Injury Centres of the United Kingdom and Ireland Initiated by Multidisciplinary Association of Spinal Cord Injury Professionals Supported by an education grant from Huntleigh Healthcare

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British Pain Society & Faculty of Pain Medicine (HEE) e-learning modules (create account with Open Athens) <https://portal.e-lfh.org.uk/> module: <https://portal.e-lfh.org.uk/Component/Details/391439>

Oxford Medical Education- Neurological examination:
<http://www.oxfordmedicaleducation.com/clinical-examinations/neurological-examination/>