AROC IMPAIRMENT CODES GUIDELINES

The aim of these guidelines is to assist in correctly classifying a rehabilitation episode according to impairment groups. There are 2 over-riding rules that need to be considered when using these guidelines:

1. The episode should be classified according to the **primary** reason for the **current** episode of rehabilitation care

2. Rehabilitation program names related to funding are not necessarily the same as the impairment group names
   (eg. a patient in a debility/reconditioning funding program may be having rehabilitation due to deconditioning related to a cardiac disorder – this episode should be classified to 9.2 Chronic cardiac insufficiency not to 16 Re-conditioning/restorative

Please note that the examples of aetiologic diagnoses that underpin each impairment, which are provided under each impairment group, are not exhaustive.

(1) STROKE

USE this group for cases with the diagnosis of cerebral ischemia due to vascular thrombosis, embolism, or haemorrhage.

Do NOT use this group for:
1. cases of brain dysfunction secondary to non-vascular causes such as trauma, inflammation, tumour or degenerative changes.
2. cases of subarachnoid haemorrhage. These should be classified to BRAIN DYSFUNCTION (2)

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
STROKE	1.1 Left Body Involvement (Right Brain) 1.2 Right Body Involvement (Left Brain) 1.3 Bilateral Involvement 1.4 No Paresis 1.9 Other Stroke	Intracerebral haemorrhage
		Other and unspecified intracranial haemorrhage
		Occlusion and stenosis of precerebral arteries, with cerebral infarction
		Occlusion of cerebral arteries, with cerebral infarction
		Acute, but ill-defined cerebrovascular disease
		Late effects of cerebrovascular disease

(2) BRAIN DYSFUNCTION

Non–traumatic Brain Dysfunction

USE this group cases with such aetiologies as neoplasm including metastases, encephalitis, inflammation, anoxia, metabolic toxicity, or degenerative processes.

Do NOT use this group for cases with hemorrhagic stroke (other than subarachnoid haemorrhage) - These should be classified to STROKE (1).

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
BRAIN DYSFUNCTION	2.11 Non-traumatic subarachnoid haemorrhage	Non-traumatic spontaneous/ berry aneurysm
	2.12 Anoxic brain damage	Anoxic brain damage(Anoxic/ hypoxic encephalopathy)
	2.13 Other non-traumatic brain dysfunction	Encephalitis
		Meningitis
		Neoplasm/tumour of brain or meninges – malignant or benign (includes secondary tumours)
		Neoplasm/tumour of cranial nerves
		Intracranial abscess
		Hydrocephalus
		Toxic encephalopathy

Traumatic Brain Dysfunction

USE this group for cases with motor and/or cognitive disorder secondary to brain trauma.

Definition: A closed head injury is defined as an injury where the meninges remain intact (includes a linear fracture of the skull)

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
BRAIN DYSFUNCTION	2.21 Traumatic, open injury	Skull fracture
		Cerebral laceration and contusion, with open intracranial wound
		Subarachnoid, subdural, extradural, and other unspecified haemorrhage following injury
		Other and unspecified intracranial haemorrhage following injury
BRAIN DYSFUNCTION	2.22 Traumatic, closed injury	Linear skull fracture
		Concussion
		Cerebral laceration and contusion
		Subarachnoid, subdural, extradural and other unspecified haemorrhage following injury
		Other and unspecified intracranial haemorrhage following injury

(3) NEUROLOGIC CONDITIONS

USE this group for cases with neurologic or neuromuscular dysfunctions of various aetiologies.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
NEUROLOGIC CONDITIONS	3.1 Multiple Sclerosis	Multiple Sclerosis
	3.2 Parkinsonism	Parkinsonism
	3.3 Polyneuropathy	Hereditary and idiopathic peripheral neuropathy Peripheral neuropathy, inflammatory, toxic, traumatic, or other Brachial plexus or lumbosacral plexus injury
	3.4 Guillain-Barré Syndrome	Acute inflammatory polyneuritis
	3.5 Cerebral Palsy	Infantile cerebral palsy
	3.8 Neuromuscular Disorders	Post poliomyelitis/ post polio syndrome
		Motor neurone disease
		Myasthenia gravis
		Muscular dystrophies and other myopathies
	3.9 Other Neurologic disorders	Other extrapyramidal disease and abnormal movement disorders
		Spinocerebellar disease
		Disorders of the autonomic nervous system
		Other demyelinating diseases of the central nervous system

(4) SPINAL CORD DYSFUNCTION

USE this group only if there is a spinal cord/ caudaequina dysfunction.

Do NOT use this group for post spinal surgery, unless the surgery has resulted in dysfunction of the spinal cord/ caudaequina.

A detailed coding guideline for patients with spinal cord injury, disease and damage is contained in the appendix to assist in the coding of patients. It is suggested that this be reviewed when considering patients with these conditions to ensure the most accurate code relevant for patient is used.

Non-traumatic Spinal Cord Dysfunction

USE this group for cases with quadriplegia/paresis and paraplegia/paresis of non-traumatic (i.e., **medical or post-operative**) origin.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
SPINAL CORD DYSFUNCTION	4.111 Paraplegia, Incomplete 4.112 Paraplegia, Complete 4.1211 Quadriplegia, Incomplete, C1-4 4.1212 Quadriplegia, Incomplete, C5-8 4.1221 Quadriplegia, Complete, C1-4 4.1222 Quadriplegia, Complete, C5-8 4.13 Other Non-traumatic Spinal Cord Dysfunction	Tuberculosis/ infective processes involving the vertebral column
		Neoplasm/ tumour of spinal column or spinal meninges, malignant or benign (includes secondary tumours)
		Neoplasm of other parts of nervous system, of unspecified nature
		Transverse myelitis
		Intraspinal or paraspinal abscess
		Dissection of aorta
		Aortic aneurysm, ruptured
		Spontaneous haematoma
		Spondylosis with myelopathy
		Spinal infarction
		Intervertebral disc disorder with myelopathy
		Spinal stenosis in cervical region (if deficits include weakness)
		Spinal stenosis, other than cervical (if deficit includes weakness)
		Late effects of spinal cord injury
		Pathological fracture with associated spinal cord dysfunction
		An unavoidable/recognised surgical complication resulting in spinal cord dysfunction following surgery for the above conditions

Traumatic Spinal Cord Dysfunction

USE this group for cases with quadriplegia/paresis and paraplegia/paresis secondary to trauma (accident/injury).

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
SPINAL CORD DYSFUNCTION	4.211 Paraplegia, Incomplete	Fracture of vertebral column with spinal cord injury
	4.212 Paraplegia, Complete	Spinal cord injury without evidence of spinal bone injury

	4.2211 Quadriplegia, Incomplete, C1-4 4.2212 Quadriplegia, Incomplete, C5-8 4.2221 Quadriplegia, Complete, C1-4 4.2222 Quadriplegia, Complete, C5-8 4.23 Other Traumatic Spinal Cord Dysfunction	Spinal cord dysfunction resulting from surgical misadventure

(5) AMPUTATION OF LIMB

USE this group for cases in which the major deficit is partial or complete absence of a limb.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
AMPUTATION OF LIMB	5.1 Single Upper Amputation Above the Elbow 5.2 Single Upper Amputation Below the Elbow 5.3 Single Lower Amputation Above the Knee (includes through the knee) 5.4 Single Lower Amputation Below the Knee 5.5 Double Lower Amputation Above the Knee (includes through the knee) 5.6 Double Lower Amputation Above/Below the Knee 5.7 Double Lower Amputation Below the Knee 5.8 Partial Foot Amputation (includes single/double) 5.9 Other Amputation	Neoplasm of bones or cartilage and other soft tissue of limb Secondary neoplasm of bone Diabetes with neurologic manifestations or diabetes with peripheral circulatory disorders Hereditary and idiopathic peripheral neuropathy Inflammatory and toxic neuropathy Atherosclerosis of the extremities Peripheral vascular disease, unspecified Arterial embolism and thrombosis, extremities Buerger's disease Acquired deformity or injury affecting limbs Aneurysm of extremities Traumatic amputation (complete) (partial) Amputation stump complication/ revision Haemangioma Vasculitis (eg scleroderma, SLE) Connective tissue disorders Gangrene Infective processes (eg osteomyelitis/ cellulitis) Congential limb loss (when prosthesis required)

(6) ARTHRITIS

USE this group for cases in which the major disorder is arthritis of all aetiologies.

Do NOT use for cases entering rehabilitation immediately after joint replacement, even if the procedure was performed secondary to arthritis. These should be classified to POST ORTHOPAEDIC SURGERY (8.211 – 08.26)

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
ARTHRITIS	6.1 Rheumatoid arthritis	Rheumatoid arthritis
		Juvenile chronic polyarthritis
		Chronic post-rheumatic arthropathy
	6.2 Osteoarthritis	Osteoarthritis and allied disorders
	6.9 Other Arthritis	Psoriatic arthropathy
		Scleroderma
		Systemic lupus erythematosus
		Systemic sclerosis
		Dermatomyositis
		Polymyositis
		Pyogenic arthritis
		Other and unspecified arthropathies
		Fibromyalgia
		Ankylosing spondylitis

(7) CHRONIC PAIN

USE this group for cases in which the primary purpose for this rehabilitation episode is pain management.

Do NOT use this group if pain management is only one component of the patient's rehabilitation program. These should be classified to the group representing the primary impairment.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
PAIN SYNDROMES	7.1 Neck Pain 7.2 Back Pain 7.3 Extremity Pain 7.4 Headache (includes migraine) 7.5 Multi-site pain 7.9 Other Pain (includes abdominal/chest wall)	Various aetiologies

(8) ORTHOPAEDIC DISORDERS

USE this group for cases in which the major disorder is post-fracture of bone or post-arthroplasty (joint replacement).

Fracture *(includes dislocation)*

USE when joint replacement (arthroplasty or hemiarthroplasty) is part of the fracture treatment (eg if rehabilitation follows a hip replacement for hip fracture)

AROC Impairment Group	AROC Impairment Group Code	
FRACTURE	8.111 Fracture of Hip, unilateral	includes #NOF
	8.112 Fracture of Hip, bilateral	includes #NOF
	8.12 Fracture of shaft of femur	excludes femur involving knee joint
	8.13 Fracture of pelvis	
	8.141 Fracture of knee	includes patella, femur involving knee joint, tibia or fibula involving knee joint
	8.142 Fracture of lower leg, ankle, foot	
	8.15 Fracture of upper limb	includes hand, fingers, wrist, forearm, arm, shoulder
	8.16 Fracture of spine	excludes where the major disorder is pain
	8.17 Fracture of multiple sites	multiple bones of same lower limb, both lower limbs, lower with upper limb, lower limb with rib or sternum. Excludes with brain injury (classify to 14.2) or with spinal cord injury (classify to 14.3)
	8.19 Other orthopaedic fracture	includes jaw, face, rib, orbit or sites not elsewhere classified

Post Orthopaedic Surgery

USE this group for cases where the orthopaedic surgery involved the revision or repair of previous orthopaedic surgery.
Do NOT use this group when orthopaedic surgery is part of acute fracture management. These should be classified to 8.111 – 8.19.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
POST ORTHOPAEDIC SURGERY	8.211 Unilateral hip replacement	Psoriatic arthropathy
		Pyogenic arthritis
	8.212 Bilateral hip replacement	Rheumatoid arthritis
		Juvenile chronic polyarthritis
	8.221 Unilateral knee replacement	Chronic post-rheumatic arthropathy
		Osteoarthritis and allied disorder
	8.222 Bilateral knee replacement	Other and unspecified arthropathies
		Ankylosing spondylitis
	8.231 Knee and hip replacement same side	Mechanical complication of internal orthopedic device, implant and graft

	8.232 Knee and hip replacement different sides 8.24 Shoulder replacement or repair	Infection and inflammatory reaction due to internal orthopedic device, implant and graft
		Other complications due to internal orthopedic or prosthetic device, implant and graft
		Neoplasm of bone and articular cartilage
		Secondary neoplasm of bone
	8.25 Post spinal surgery	Includes nerve root injury (laminectomy, spinal fusion, discectomy) Includes spinal deformity surgery Excludes spinal cord, caudaequina/major nerve root dysfunction (classify to 4)
	8.26 Other orthopaedic surgery	Other and unspecified disorders of joint
		Pathologic fracture requiring surgical intervention
		Osteotomy
		Bone Lengthening

(9) CARDIAC

USE for cases in which the purpose of this rehabilitation episode is to address poor activity tolerance secondary to cardiac insufficiency or general deconditioning due to cardiac disorder.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
CARDIAC DISORDERS	9.1 Cardiac disorder following recent onset of new cardiac impairment	Acute myocardial infarction
		Cardiac myopathy
		Post cardiac surgery
	9.2 Chronic cardiac insufficiency	Coronary atherosclerosis Ischemic heart disease Heart failure Cardiac myopath
	9.3 Heart or heart/lung transplant	

(10) PULMONARY DISORDERS

USE for cases in which the purpose of this rehabilitation episode is to address poor activity tolerance secondary to pulmonary insufficiency.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
PULMONARY DISORDERS	10.1 Chronic Obstructive Pulmonary Disease	Chronic obstructive pulmonary disease
	10.2 Lung Transplant	

	10.9 Other Pulmonary Disorders	Chronic bronchitis Post pneumonia Emphysema Asthma Bronchiectasis Pulmonary insufficiency following trauma, surgery

(11) BURNS

USE for cases in which the purpose of this rehabilitation episode is to address burns to major areas of skin and/or underlying tissue.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
BURNS	11 Burns	

(12) CONGENITAL DEFORMITIES

USE for cases in which the purpose of this rehabilitation episode is to address an anomaly or deformity of the nervous or musculoskeletal system that has been present since birth.

12.1 Spina Bifida
12.9 Other Congenital Deformities

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
CONGENITAL DEFORMITIES	12.1 Spina Bifida	Spina Bifida
	12.9 Other congenital deformities	Arthrogryposis
		Other congenital anomalies of nervous system
		Osteogenesis imperfecta

(13) OTHER DISABLING IMPAIRMENTS

USE 13.1 for cases in which the major disorder is lymphoedema.

USE 13.2 for cases that cannot be classified into any other impairment group. This group should be rarely used.

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
OTHER DISABLING IMPAIRMENTS	13.1 Lymphoedema	
	13.2 Other Disabling Impairments	This group should be rarely used.

(14) MAJOR MULTIPLE TRAUMA

USE for trauma cases with complex management due to involvement of **multiple systems or sites**, where specialised rehabilitation is required for each of the impairments.

Do NOT use for multiple fractures. These should be classified to FRACTURE OF MULTIPLE SITES (8.17).

AROC Impairment Group	AROC Impairment Group Code		Aetiologic Diagnosis
MAJOR MULTIPLE TRAUMA	14.1	Brain + Spinal Cord Injury (spinal cord/ caudaequina/ spinal nerve root (major plexus or multiple roots))	
	14.2	Brain + Multiple Fracture/Amputation	
	14.3	Spinal Cord (spinal cord/ caudaequina/ spinal nerve root (major plexus or multiple roots)) + Multiple Fracture/Amputation	
	14.9	Other Multiple Trauma	

(15) DEVELOPMENTAL DISABILITY

USE for patients who have significant intellectual disabilities/ mental retardation.

Do NOT use for cases of cerebral palsy. These should be classified to CEREBRAL PALSY (3.5)

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
DEVELOPMENTAL DISABILITY	15.1 Developmental Disability	

(16) RE-CONDITIONING/ RESTORATIVE

USE for cases with generalized deconditioning not attributable to any of the other Impairment Groups (eg. where deconditioning is due to a cardiac disorder classify as 9.2; where deconditioning is due to pulmonary insufficiency classify as 10.2)

AROC Impairment Group	AROC Impairment Group Code	Aetiologic Diagnosis
RECONDITIONING/ RESTORATIVE	16.1 Re-conditioning/ restorative following surgery	Muscular wasting and disuse atrophy, not elsewhere classified
		Unspecified disorder of muscle, ligament and fascia
	16.2 Re-conditioning/ restorative following medical illness	Chronic fatigue syndrome
		Other malaise and fatigue
	16.3 Cancer rehabilitation	Deconditioning as a result of cancer or treatment for cancer.

Appendix 1

Interim recommendations on the coding of spinal cord injury for the Australasian Rehabilitation Outcome Centre (AROC) data collection.

prepared by Dr Peter New, Dr Ruth Marshall and Raymond Cripps
March 2008

Spinal cord injury (SCI) has been defined as "… the occurrence of an acute, traumatic lesion involving neural elements in the spinal canal (spinal cord and cauda equina) resulting in resolving or permanent neurological deficit.(1) It is well documented, however, that damage to the 'neural elements in the spinal canal (spinal cord and cauda equina) resulting in resolving or permanent neurological deficit' can also arise from non traumatic causes. The descriptive label given to these types of SCI include the following: Non-traumatic spinal cord injury (NT-SCI), spinal cord disease (medical subject database – [MeSH] URL www.ncbi.nlm.nih.gov/sites/entrez?db=mesh) and spinal cord lesion (eg Journal *Spinal Cord* Editors Page and published manuscripts from April 2007, onwards). The most common term used in the medical literature appears to be non-traumatic spinal cord injury.

Currently, there is no specific internationally agreed definition on exactly what conditions should be considered as NT-SCI. In many situations this would appear to be clear cut. In some situations, however, the correct classification is not always so evident. There is a potential, therefore for variation in classification of the aetiology of SCI. This can affect the quality of data collected for research and outcomes measurement.

There is currently an international working group that is progressing towards a uniform taxonomy for the classification of SCI, including consideration of how traumatic SCI and NT-SCI conditions should be defined and classified. It is estimated that this process will not be completed until the end of 2008, at the earliest. An audit of 2006 AROC data submissions that examined the coding and classification of SCI revealed a number on inconsistencies in the conditions that are described as SCI. For the purpose of trying to provide a degree of clarification regarding the classification of SCI, and to improve the accuracy of AROC data, the following interim recommendations are made regarding how patients admitted for rehabilitation should have their impairment classified for the purposes of AROC data collection.

1. It is recommended that the term spinal cord injury only be used to include lesions affecting the neural elements in the spinal canal, i.e. the spinal cord and cauda equina.

2. The following impairments are excluded from the AROC spinal cord injury classification:
    - multiple sclerosis
    - polyneuropathy
    - Guillain Barre syndrome
    - cerebral palsy

- neuromuscular disorders including motor neuron disease
- nerve root lesions

All of these above diagnoses should be classified under "neurological conditions"

- spina bifida

Although from a neurological perspective Spina Bifida is a cause of NT-SCI, this is classified separately in the AROC impairment system under "congenital deformities"

3. Traumatic spinal cord injury
   Spinal cord injury should be classified as traumatic if there is an external force or wound, typically resulting from violence or accident, that results in a spinal cord injury, as defined above. The most common causes in Australia are motor vehicle accidents, falls, collisions with another person or object, water related accidents and other sporting activities, gun shots and explosives and stabbing injuries.

4. Non traumatic spinal cord injury
   The most common causes of non traumatic spinal cord injury include the following: infection, tumours, inflammation (e.g. transverse myelitis or meningoencephalomyelitis), vascular (spontaneous cord haematoma or spinal cord infarction), degenerative myelopathy from spinal canal stenosis, with or without disc prolapse, with no obvious documented preceding trauma, endocrine and metabolic (B12 deficiency, Paget's, ankylosing spondylitis), and a range of other less common conditions.

5. The "grey zone" regarding classification of aetiology of spinal cord injury
   There are a number scenarios where the classification of aetiology not clear. For example:
   i) cord infarction that occurs in the setting of elective aortic aneurysm repair
   ii) trauma with a vertebral fracture and no initial spinal cord injury that is operated on and due to surgical complications results in a spinal cord infarction.

   It is suggested that until the international working party formulates specific guidelines, these scenarios should be classified as NT-SCI as the mechanism of damage, accepting that there is an external cause that contributes.

It is planned to revise these interim guidelines by March 2009.

References

1 Thurman DJ, Sniezek JE, Johnson D, Greenspan A, Smith SM. Guidelines for Surveillance of Central Nervous System Injury. Atlanta: Centres for Disease Control & Prevention; 1995: 1-106