

AIS Clarification Documents

2012 - 2013

Using the AIS Dictionary

Coding rules and box bold directives have been integrated widely into the dictionary where they apply to specific organs, structures, body regions or at the beginning of each chapter to assist with accurate coding. Coders should refer to them frequently.

AIS Clarifications 2012

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Definitions that apply throughout the AIS Dictionary:

Perforation is defined as a hole or break or opening made through the entire thickness of a membrane, wall or other tissue of an organ or structure of the body.

Rupture is defined as the process or instance of breaking open or bursting to forcibly disrupt tissue resulting in a hole, break or opening with stellate edges or devitalized/fragmented tissue made through the entire thickness of a membrane or other tissue of an organ or structure.

The terms 'arch' and 'ring' may be used interchangeably when describing a portion of the vertebra or pelvis.

Neurological deficit is defined as a loss or deficit in function of the nervous system that was not present pre-injury and lasts for more than a transient period (more than a few minutes). Examples include: weakness, numbness, tingling, mental status changes, dysfunction of language, vision, reflexes.

A *major (complex) laceration* is defined as an injury in which the tissues are torn from a blunt or penetrating force. It must involve deeper tissues (subcutaneous tissue and possibly muscle) causing jagged or irregular edges. This type of wound, in the surviving victim, would generally require a layered closure, revision of the jagged edges or extensive cleaning or removal of debris.

Branches of vessels are not coded unless the branch has a **specific** anatomical name or it is included within a vessel descriptor. To assign the injury code with a descriptor 'and its named branches', the branch must be a direct tributary of that vessel. For other specifically named vessels use the categories "other named arteries" or "other named veins".

Injury Example: A laceration, NFS, of the Gluteal Artery:

Iliac Artery (p.84) [common, internal, external] and its named branches Use code 520604.3 laceration NFS.
This is a direct tributary of the Internal Iliac Artery and a named arterial vessel.

However, a laceration of the Iliolumbar Artery would be assigned to "other named arteries" as it is not a direct tributary of the Internal Iliac Artery.

Epiphyseal injuries – Refer to educational resources, e.g. Orthopaedic Trauma Association (OTA) – Fracture and dislocation classification compendium and the section for children for guidance in coding these injuries.

<http://www.ota.org/compendium/compendium.html>

DICTIONARY

AIS Coding Rules and Guidelines (p.18) Gunshot wounds resulting in bony fractures or with the missile "lodged in" the bone are coded as open fractures.

HEAD

Retroclival hematoma – At this time retroclival hematoma is not a codeable injury in AIS.

Vascular injuries (p.32): Vasospasm is a transient occurrence that may or may not show up on imaging. It is the result of injury or insult to the artery and is not an injury in and of itself. Vasospasm cannot be coded.

Hemorrhagic Contusion (Contusional Hematoma) (p45): Code as contusion since 'hemorrhagic' is the adjective describing the contusion.

Brain edema/swelling (p. 47): The coder should use the terminology used by the local practitioner when deciding whether to code as edema or swelling. The severities are the same for both.

Hypoxic brain damage (p.47): Hypoxic brain damage may be coded in instances where such conditions as hypovolemia or hypoxia lead to this damage and the hypoxic brain damage is not directly related to a lesion in the brain. It is possible to have hypoxic brain damage in addition to a lesion within the brain when such lesion would not cause hypoxic brain damage (e.g. small contusions in addition to hypovolemic shock leading to hypoxic brain damage).

Skull fracture (p.49): The temporal bone consists of three portions, the squamous, shell-like portion that is part of the skull vault, and the mastoid and petrous portions which make up part of the skull base. In the rule box describing skull base the word "squamous" should be deleted. In the rule box describing the skull vault, the words "squamous portion only" should be inserted after the word 'temporal'.

Penetrating injury to skull (p. 31): Any penetrating injury involving the brain stem should be coded to I40216.6 no matter how many other regions of the brain are also involved.

Penetrating injury to cerebellum (p 43) and cerebrum (p47): Penetrating injury to the cerebellum or cerebrum should be measured from the surface of the cerebellum or cerebrum when coding it as < 2cm or ≥ 2cm. If this cannot be determined, it should be coded using the inner table of the skull. If the penetrating injury crosses both regions, defer to the 'penetrating injury >I area rule.

DAI rule box (p. 45): The directions state "If coma exceeds 24 hours and diagnosis meets coding rules for DAI, use I61011.5" The intention is to direct the coder to the Concussive Injury section on p. 51 and, if information about brainstem signs is available, any of three codes may be used – I61011.5 or I61012.5 or I61013.5.

Concussion/LOC (p. 51): LOC must be documented by a physician, or by a Nurse Practitioner or Physician Assistant or other recognized physician extender acting on the behalf of the physician.

Loss of consciousness codes (p. 51): LOC may be coded **even in the absence of** a specific diagnosis of "concussion" as long as the LOC is documented by a physician, a Nurse Practitioner, Physician Assistant or other recognized physician extender acting on the behalf of the physician.

FACE

Iris: The uvea is part of the eye, consisting collectively of the iris, the choroid of the eye, and the ciliary body, therefore code iris under Uvea (p. 58).

Mandible fractures (p.59): Multiple mandible fractures receive only one AIS code. The fracture should be assigned to the largest mass area of the mandible that is involved.

Orbit (p.62): The lamina papyracea is part of the medial wall of the orbit.

Complex Zygoma fractures (p.63): The anatomic area which includes the zygoma is frequently referred to as the "zygomaticomaxillary complex (ZMC)" or the "zygomatic complex". A fracture in this area may be described as a zygomatic complex fracture. The correct code for this is 251800.I. Only if there are additional fracture lines through the main fragment (not minor comminution) and the fracture meets Knight North classification criteria for KN VI, should the code for complex be used. This might be described as a complex fracture of the zygomatic complex.

Panfacial (p. 63) - Frontal bone fractures may sometimes be included in the panfacial code and if so, should not be coded separately.

NECK

Vascular Injuries (p. 66-67): If the injury is described only as a 'dissection' and there is no disruption to the vessel code to intimal tear, no disruption.

Salivary gland (p. 70): Parotid gland is included in this code.

THORAX

Heart (p.77) Code 441012.5 “perforation, ventricular or atrial, with or without tamponade” should read “perforation, either ventricular or atrial, with or without tamponade” (add word ‘either’)

Inhalation injury (p. 80) Inhalation codes include all airway burns from mouth and nose to lungs. Do not code mouth or pharynx separately.

Code 419200.2 “inhalation injury NFS (heat, particulate matter, noxious agents)” should read “heat, particulate matter, caustic or noxious agents” (add word ‘caustic’)

Hemomediastinum (p.81) This code includes mediastinal contusion

Lung contusions and lacerations (p.78) 'Scattered' lung contusions or lacerations should be coded to the unilateral or bilateral NFS code.

Flail chest definition (p. 82) The definition of flail chest should read:

“Flail chest” is defined as three or more **adjacent** ribs, **each** fractured in more than one location (e.g. posterolateral and anterolateral) to create a free floating segment, **which may** or may not result in paradoxical chest movement.

ABDOMEN

Bladder - Urinary (p.88) Lacerations to the bladder wall that occur outside the peritoneal cavity (extraperitoneal) are commonly associated with a fracture of the pelvis. Lacerations to the bladder wall that occur within the peritoneal cavity (intraperitoneal) usually involve the dome of the bladder and the injury generally follows a blow to the abdomen. The following link provides excellent illustrations: <http://www.primary-surgery.org/ps/vol2/html/sect0302.html>

Colon (p.89) These codes include injuries to the cecum.

Duodenum (p.89) Code 541021.2 “disruption < 50% circumference [OIS II]” should read “perforation, disruption < 50% circumference [OIS II]” (add word ‘perforation’).

SPINE

Spine coding algorithm - To facilitate obtaining the correct code for spinal injuries, the following algorithm is offered:

- (1) Is the spinal cord involved? ,
- (2) Is it a contusion/laceration?
- (3) Is the deficit transient, incomplete or complete?
- (4) Is there a fracture or dislocation or both?

EXTREMITIES

Upper / Lower Extremities: Muscle laceration (p.116 & 136) and Muscle tear; avulsion (p.119 & 140):

Muscle lacerations occurring from a penetrating / external injury (from the skin down to and including the muscle) are coded to the Skin/subcutaneous/muscle section.

Muscle tears and avulsions generally occurring from blunt, stretching-type trauma (sports injury) without an overlying laceration are coded to the Muscles, Tendon, Ligaments section.

UPPER EXTREMITY

Scapula (p. 123) Fractures of the acromion should be coded as 750900.2 Scapula fracture NFS.

Humerus (p. 125) The surgical neck of the humerus is located at the junction of the proximal section and the shaft. It should be coded as 751151.2 Proximal humerus - extra-articular. The following link provides an excellent illustration:

http://en.wikipedia.org/wiki/Surgical_neck_of_the_humerus

LOWER EXTREMITY

Femur (p. 147) Subtrochanteric fracture should be coded to femur shaft fracture.

Distal Tibia (p. 149) Code posterior malleolus to distal tibia.

Pelvis (p.159) Malgaigne’s fracture is a vertical shear injury and should be assigned to the section for complete disruption of the pelvic ring.

EXTERNAL (Skin) and THERMAL INJURIES

Burns (p.165) Sunburn and radiation burns are not currently coded in AIS.

OTHER TRAUMA:

Hypothermia (p.167) Code hypothermia to whole number temperature only; do not round up or down. For example, 31.7 C should be assigned to 010006.3

AIS Clarifications 2013

**January 2013. This document was compiled by the AAAM - AIS Content Committee.
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Definitions that apply throughout the AIS Dictionary:

Vessel dissection should be coded to intimal tear for all vessels including descriptors for carotid artery common/internal, carotid artery external and vertebral artery.

DICTIONARY

Internal carotid artery: May refer to either AIS Head **or** Neck chapters; AIS Head codes 121099.3 to 121006.3 "Internal carotid artery" and 320099.9 to 320223.4 "Carotid artery". When the exact location of the injury is not specified as to head or neck, code to the neck region with applicable associated detail (laceration, thrombosis, occlusion, etc.).

External carotid artery: See also Face chapter which includes branches of the external carotid artery.

Vertebral Artery: May refer to either AIS Head **or** Neck chapters.

When the exact location of the injury is not specified as to head or neck, code to the neck region with applicable associated detail (laceration, thrombosis, occlusion, etc).

HEAD

Multiple hematomas / SDH small or large same hemisphere: When multiple small (140640.4) or large (140648.5) hematomas **OR** when multiple small (140652.4) or large (140656.5) SDH are diagnosed, code each individually **IF** they are separate and individual hematomas / bleeds of the same (unilateral) hemisphere. If both hemispheres are involved use the bilateral code.

E.g.: 2 codes would be required for

Small (L) frontal SDH - 140652.4

Small (L) occipital SDH - 140652.4

Skull – fractured vault 150406.4 (p.49): The descriptor "complex; open with torn, exposed or loss of brain tissue" is meant to read "torn **dura**".

FACE

Retrobulbar haemorrhage: Use code 240499.1 - Eye – NFS (p.56).

Nose amputation: Code as a skin avulsion according to its level of severity (p.54).

"Displacement must be significant": For mandible fractures and nasal fractures, code the description "minimally displaced" as non-displaced.

LeFort fractures are coded as per the LeFort definitions (p. 61). Medical documentation indicating appropriate LeFort bone fractures may qualify for LeFort fracture coding when the word "LeFort" is not explicitly used in the documentation.

Panfacial fractures: Multiple and complex **bilateral** fractures of the face not conforming to the standard classifications of LeFort but resulting in significant deformation and meeting the pan facial fracture definition (p. 63) should be coded using the panfacial codes 251900.3 / 251902.4.

THORAX

Skin / subcutaneous / muscle injuries described as 'degloving' should be coded as avulsion (p.72).

Intracardiac chordae tendineae 440400.5 (p.78) includes papillary muscle injury.

Thoracic injuries (p. 81) – The 1000cc blood loss descriptor is meant to indicate blood loss of 20% in the individual. When coding pediatric or other individuals with smaller blood volumes use 20% blood loss parameter instead of 1000cc.

Thoracic Injury NFS 442299.9 (p.81) refers to Thoracic **cavity** injury.

Traumatic Pneumatocele: This is a sequele resulting from injury and cannot be coded at this time. Documentation of a specific pulmonary injury should be pursued.

ABDOMEN

Skin / subcutaneous / muscle injuries described as 'degloving' should be coded as avulsion (p.83).

SPINE

Cauda equina laceration: Cauda equina injuries described as laceration should be coded under cauda equina contusion.

The following change was included inadvertently when originally published in 2013 and should not be implemented at this time.

~~If spinal fractures and dislocations occur together without associated cord injuries code the fracture and the dislocation separately.~~

~~E.g.: Dislocation C4/5 and fracture C4 vertebral body (no cord involvement)~~

~~650230.2 – Fracture with no cord involvement – vertebral body NFS (“burst fracture”)~~

~~650204.2 – Dislocation [subluxation] with no cord involvement~~

~~Coding rule: – code dislocation to superior vertebra.~~

If there is spinal cord compression or epidural/subdural hemorrhage but no neurologic deficit along with an associated fracture, code the spinal cord injury as NFS and the fracture as if there was no cord involvement.

Lateral mass: Lateral mass fractures should be coded as pedicle fractures.

EXTREMITY (Upper and Lower)

“Fracture and Dislocation Compendium” which provides information and additional illustrations of various fractures is available from the Orthopaedic Trauma Association (OTA) educational resources – www.ota.org

UPPER EXTREMITY

Ligament injuries to named ligaments in the upper extremity should be coded as a sprain in the associated joint.

LOWER EXTREMITY

Foot dislocations include talonavicular, calcaneocubiod, talocalcaneal, and metatarsal-phalangeal dislocations.

874030.2 Knee joint dislocation (p.141) includes patellar dislocation (knee joint consists of proximal tibia, distal femur and patella).

854351.2 Distal Tibia fracture (p.149) includes isolated or associated posterior malleolus.

856100.2 Pelvic ring fracture (p.159) includes "pelvic ring dislocation".

Pelvic fracture codes (p.159) incomplete or complete disruption with blood loss:

Blood loss ≤ 20% by volume may be used for documented small / moderate pelvic hematoma

Blood loss > 20% by volume may be used for documented large / extensive pelvic hematoma

The following chart may be helpful in coding pelvic fractures:

Pelvic Ring Fracture Stability and Medical Documentation / AIS Code Applicability

STABLE	PARTIALLY UNSTABLE	TOTALLY UNSTABLE
Isolated simple fracture of: Pubic ramus Ilium Ischium Sacral ala	Wide symphysis pubis Separation (>2.5 cm)	Public ramus fracture with sacroiliac fracture/dislocation
Transverse fracture of sacrum and coccyx – with or without sacrococcygeal dislocation	Anterior compression fracture of sacrum	Fracture involving posterior arch with complete loss of posterior osteoligamentous integrity
Minor symphysis pubis separation (< 2.5 cm)	Fracture involving posterior arch with posterior ligamentous integrity partially maintained	Fracture involving posterior arch with pelvic floor disruption
Tile Classification - A	Fracture involving posterior arch, but pelvic floor intact	Tile Classification - C
OTA Classification - A	Bilateral fractures with posterior ligamentous integrity partially maintained	OTA Classification – C
Young/Burgess Classification – AP1	Tile Classification - B	Young/Burgess Classification – LC3, AP3 and VS
	OTA Classification – B	Vertical shear Malgaigne fracture
	Young/Burgess Classification – LC1, LC2 and AP2	Sacroiliac joint with posterior disruption
	Sacroiliac joint with anterior disruption	
	“Open book” fracture<2.5 cm	

Acetabular Fractures

PARTIAL ARTICULAR - One Column	PARTIAL ARTICULAR - Transverse	COMPLETE ARTICULAR - Both Columns
Posterior Wall	Transverse	Both Columns
Posterior Column	T-Shaped	
Anterior Column	Anterior Column, Posterior Hemitransverse	
Anterior Wall	Transverse with Posterior Wall	
Posterior Column with Posterior Wall	Transverse with Posterior Wall	

OTHER TRAUMA

Caustic Agents (p.166) includes noxious agents.

Carbon monoxide poisoning is not an injury, therefore it is not coded.

020006.5 – Asphyxia / Suffocation (p.166)

060006.5 – Drowning (p.166)

080004.5 – Electrical Injury (p.166)

“with cardiac arrest documented by medical personnel” includes documentation from EMS or pre-hospital personnel.