# Supplementary Online Content

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## eTable 1. Fracture codes

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| --- | --- | --- |
| code | system | description |
| S2...11 | Read | Arm fracture |
| S28..11 | Read | Ill-defined fracture of arm |
| S28z.00 | Read | Ill-defined fractures of upper limb NOS |
| S28..00 | Read | Ill-defined fractures of upper limb |
| S280.00 | Read | Closed ill-defined fractures of upper limb |
| S281.00 | Read | Open ill-defined fractures of upper limb |
| S29..11 | Read | Multiple fractures of arm |
| S294000 | Read | Cl fractures involving multiple regions of both upper limbs |
| SR12000 | Read | Closed fractures involving multiple regions of one upp limb |
| S120900 | Read | Closed fracture multiple ribs |
| S120100 | Read | Closed fracture of one rib |
| S120000 | Read | Closed fracture of rib, unspecified |
| S112.00 | Read | Closed fracture of thoracic spine with spinal cord lesion |
| S120.00 | Read | Closed fracture rib |
| S122.00 | Read | Closed fracture sternum |
| S102.00 | Read | Closed fracture thoracic vertebra |
| S102z00 | Read | Closed fracture thoracic vertebra not otherwise specified |
| S102000 | Read | Closed fracture thoracic vertebra, burst |
| S102500 | Read | Closed fracture thoracic vertebra, posterior arch |
| S102300 | Read | Closed fracture thoracic vertebra, spinous process |
| S102200 | Read | Closed fracture thoracic vertebra, spondylolysis |
| S102400 | Read | Closed fracture thoracic vertebra, transverse process |
| S102100 | Read | Closed fracture thoracic vertebra, wedge |
| S150000 | Read | Closed multiple fractures of thoracic spine |
| N331011 | Read | Collapse of thoracic vertebra |
| N331F00 | Read | Collapse of thoracic vertebra |
| N331K00 | Read | Collapse of thoracic vertebra due to osteoporosis |
| S127.00 | Read | Fracture of rib |
| S128.00 | Read | Fracture of sternum |
| S15..00 | Read | Fracture of thoracic vertebra |
| S150.00 | Read | Multiple fractures of thoracic spine |
| S29..12 | Read | Multiple rib fractures |
| S102y00 | Read | Other specified closed fracture thoracic vertebra |
| S12z.11 | Read | Rib fracture NOS |
| N331000 | Read | Pathological fracture of thoracic vertebra |
| S103.00 | Read | Open fracture thoracic vertebra |
| S103100 | Read | Open fracture thoracic vertebra, wedge |
| S103500 | Read | Open fracture thoracic vertebra, posterior arch |
| S120200 | Read | Closed fracture of two ribs |
| S120300 | Read | Closed fracture of three ribs |
| S120400 | Read | Closed fracture of four ribs |
| S120500 | Read | Closed fracture of five ribs |
| S120600 | Read | Closed fracture of six ribs |
| S120700 | Read | Closed fracture of seven ribs |
| S120800 | Read | Closed fracture of eight or more ribs |
| S120A00 | Read | Cough fracture |
| S120z00 | Read | Closed fracture of rib(s) NOS |
| S121.00 | Read | Open fracture rib |
| S121000 | Read | Open fracture of rib, unspecified |
| S121200 | Read | Open fracture of two ribs |
| S121700 | Read | Open fracture of seven ribs |
| S121900 | Read | Open fracture multiple ribs |
| S121z00 | Read | Open fracture of rib(s) NOS |
| S123.00 | Read | Open fracture sternum |
| S127000 | Read | Multiple fractures of ribs |
| S127100 | Read | Cough fracture of ribs |
| S12z.12 | Read | Sternum fracture NOS |
| S150100 | Read | Open multiple fracture of thoracic spine |
| S29..13 | Read | Multiple fractures of sternum |
| S4J0000 | Read | Closed fracture-dislocation of sternum |
| S4J1000 | Read | Open fracture-dislocation of sternum |
| S4J1200 | Read | Open fracture-dislocation sterno-clavicular joint, anterior |
| S4J2000 | Read | Closed fracture-subluxation of sternum |
| S4J3000 | Read | Open fracture-subluxation of sternum |
| S12X000 | Read | Closed fracture of bony thorax part unspecified |
| S12y000 | Read | Closed fracture of other parts of bony thorax |
| S352300 | Read | Closed fracture cuboid |
| S352700 | Read | Closed fracture metatarsal |
| S350.00 | Read | Closed fracture of calcaneus |
| S360.00 | Read | Closed fracture of one or more phalanges of foot |
| 7K1LB00 | Read | Closed reduction of fracture of hallux |
| 7K1LA00 | Read | Closed reduction of fracture of toe |
| S356.00 | Read | Fracture of metatarsal bone |
| S36..00 | Read | Fracture of one or more phalanges of foot |
| S363.00 | Read | Fracture of other toe |
| S355.00 | Read | Fracture of talus |
| S35..11 | Read | Metatarsal bone fracture |
| S3x4.00 | Read | Multiple fractures of foot |
| S362100 | Read | Open fracture of great toe |
| S350.12 | Read | Os calcis fracture |
| S36..11 | Read | Toe fracture |
| 7K1L900 | Read | Closed reduction of fracture of metatarsus |
| S35..12 | Read | Tarsal bone fracture |
| S350.11 | Read | Heel bone fracture |
| S350000 | Read | Closed fracture calcaneus, extra-articular |
| S350100 | Read | Closed fracture calcaneus, intra-articular |
| S351.00 | Read | Open fracture of calcaneus |
| S351100 | Read | Open fractures calcaneus, intra-articular |
| S352.00 | Read | Closed fracture of other tarsal and metatarsal bones |
| S352.11 | Read | March fracture |
| S352000 | Read | Closed fracture of tarsal bone, unspecified |
| S352100 | Read | Closed fracture of talus |
| S352111 | Read | Closed fracture of astragalus |
| S352200 | Read | Closed fracture navicular |
| S352400 | Read | Closed fracture medial cuneiform |
| S352500 | Read | Closed fracture intermediate cuneiform |
| S352600 | Read | Closed fracture lateral cuneiform |
| S352800 | Read | Closed fracture talus, head |
| S352900 | Read | Closed fracture talus, neck |
| S352A00 | Read | Closed fracture talus, body |
| S352B00 | Read | Closed fracture metatarsal base |
| S352C00 | Read | Closed fracture metatarsal shaft |
| S352D00 | Read | Closed fracture metatarsal neck |
| S352E00 | Read | Closed fracture metatarsal head |
| S352F00 | Read | Closed fracture metatarsal, multiple |
| S352G00 | Read | Closed tarsal fractures, multiple |
| S352H00 | Read | Closed fracture of cuneiforms |
| S352J00 | Read | Closed fracture of base of fifth metatarsal |
| S352z00 | Read | Closed fracture of one or more tarsal + metatarsal bones NOS |
| S353.00 | Read | Open fracture of other tarsal and metatarsal bones |
| S353000 | Read | Open fracture of tarsal bone, unspecified |
| S353100 | Read | Open fracture of talus |
| S353200 | Read | Open fracture navicular |
| S353300 | Read | Open fracture cuboid |
| S353400 | Read | Open fracture medial cuneiform |
| S353500 | Read | Open fracture intermediate cuneiform |
| S353600 | Read | Open fracture lateral cuneiform |
| S353700 | Read | Open fracture metatarsal |
| S353800 | Read | Open fracture talus, head |
| S353900 | Read | Open fracture talus, neck |
| S353A00 | Read | Open fracture talus, body |
| S353B00 | Read | Open fracture metatarsal base |
| S353C00 | Read | Open fracture metatarsal shaft |
| S353D00 | Read | Open fracture metatarsal neck |
| S353E00 | Read | Open fracture metatarsal head |
| S353F00 | Read | Open fracture metatarsal, multiple |
| S353H00 | Read | Open fracture cuneiforms |
| S353J00 | Read | Open fracture of base of fifth metatarsal |
| S353z00 | Read | Open fracture of tarsal and metatarsal bones NOS |
| S360000 | Read | Closed fracture proximal phalanx, toe |
| S360100 | Read | Closed fracture middle phalanx, toe |
| S360200 | Read | Closed fracture distal phalanx, toe |
| S360300 | Read | Closed fracture multiple phalanges, toe |
| S361.00 | Read | Open fracture of one or more phalanges of foot |
| S361000 | Read | Open fracture proximal phalanx, toe |
| S361100 | Read | Open fracture middle phalanx, toe |
| S361200 | Read | Open fracture distal phalanx, toe |
| S361300 | Read | Open fracture multiple phalanges, toe |
| S362000 | Read | Closed fracture of great toe |
| S4H0.00 | Read | Closed fracture-dislocation foot |
| S4H0000 | Read | Closed fracture-dislocation, subtalar joint |
| S4H0100 | Read | Closed fracture-dislocation, midtarsal joint |
| S4H0200 | Read | Closed fracture-dislocation, tarsometatarsal joint |
| S4H0400 | Read | Closed fracture-dislocation, IPJ, single toe |
| S4H0600 | Read | Closed fracture-dislocation, IPJ, multiple toes |
| S4H1.00 | Read | Open fracture-dislocation, foot |
| S4H1000 | Read | Open fracture-dislocation, subtalar joint |
| S4H1100 | Read | Open fracture-dislocation, midtarsal joint |
| S4H1200 | Read | Open fracture-dislocation, tarsometatarsal joint |
| S4H1300 | Read | Open fracture-dislocation, metatarsophalangeal joint, single |
| S4H1400 | Read | Open fracture-dislocation, IPJ, single toe |
| S4H1600 | Read | Open fracture-dislocation, IPJ, multiple toes |
| S4H2.00 | Read | Closed fracture-subluxation, foot |
| S4H2000 | Read | Closed fracture-subluxation, subtalar joint |
| S4H2100 | Read | Closed fracture-subluxation, midtarsal joint |
| S4H2200 | Read | Closed fracture-subluxation, tarsometatarsal joint |
| S4H2400 | Read | Closed fracture-subluxation, IPJ, single toe |
| S4H2600 | Read | Closed fracture-subluxation, IPJ, multiple toes |
| S4H3.00 | Read | Open fracture-subluxation, foot |
| S4H3300 | Read | Open fracture-subluxation, metatarsophalangeal joint, single |
| S4H3400 | Read | Open fracture-subluxation, IPJ, single toe |
| Syu5400 | Read | [X]Fracture of forearm, unspecified |
| Syu5300 | Read | [X]Fracture of other parts of forearm |
| S234D00 | Read | Closed fracture distal radius, extra-articular, other type |
| S234C00 | Read | Closed fracture distal radius, intra-articular, die-punch |
| S234E00 | Read | Closed fracture distal radius, intra-articular, other type |
| S234500 | Read | Closed fracture distal ulna, unspecified |
| S234z00 | Read | Closed fracture of forearm, lower end, NOS |
| S234000 | Read | Closed fracture of forearm, lower end, unspecified |
| S23x000 | Read | Closed fracture of forearm, unspecified |
| S230.00 | Read | Closed fracture of proximal radius and ulna |
| S230400 | Read | Closed fracture of proximal ulna, comminuted |
| S23x100 | Read | Closed fracture of radius (alone), unspecified |
| S234.00 | Read | Closed fracture of radius and ulna, lower end |
| S23xz00 | Read | Closed fracture of radius and ulna, NOS |
| S232.00 | Read | Closed fracture of radius and ulna, shaft |
| S232z00 | Read | Closed fracture of radius and ulna, shaft, NOS |
| S23x.00 | Read | Closed fracture of radius and ulna, unspecified part |
| S232000 | Read | Closed fracture of radius, shaft, unspecified |
| S234200 | Read | Closed fracture of the distal radius, unspecified |
| S230500 | Read | Closed fracture of the proximal ulna |
| S232100 | Read | Closed fracture of the radial shaft |
| S23x300 | Read | Closed fracture of the radius and ulna |
| S232200 | Read | Closed fracture of the ulnar shaft |
| S23x200 | Read | Closed fracture of ulna (alone), unspecified |
| S230100 | Read | Closed fracture olecranon, extra-articular |
| S234600 | Read | Closed fracture radius and ulna, distal |
| S232300 | Read | Closed fracture radius and ulna, middle |
| S230A00 | Read | Closed fracture radius and ulna, proximal |
| S230600 | Read | Closed fracture radius, head |
| S230700 | Read | Closed fracture radius, neck |
| S4C0000 | Read | Closed fracture-dislocation distal radio-ulnar joint |
| S234800 | Read | Closed Galeazzi fracture |
| 7K1LE00 | Read | Closed reduction of fracture of elbow |
| S23C.00 | Read | Fracture of lower end of both ulna and radius |
| S23B.00 | Read | Fracture of lower end of radius |
| S23..00 | Read | Fracture of radius and ulna |
| S23z.00 | Read | Fracture of radius and ulna, NOS |
| S23x111 | Read | Fracture of radius NOS |
| S239.00 | Read | Fracture of shaft of radius |
| S238.00 | Read | Fracture of shaft of ulna |
| S23A.00 | Read | Fracture of shafts of both ulna and radius |
| S23x211 | Read | Fracture of ulna NOS |
| S237.00 | Read | Fracture of upper end of radius |
| 7K1LL00 | Read | Closed reduction of fracture of radius and or ulna |
| S23..11 | Read | Forearm fracture |
| S230000 | Read | Closed fracture of proximal forearm, unspecified part |
| S230200 | Read | Closed fracture of ulna, coronoid |
| S230300 | Read | Closed Monteggia's fracture |
| S230800 | Read | Closed fracture proximal radius, comminuted |
| S230900 | Read | Closed fracture of the proximal radius |
| S230B00 | Read | Closed fracture olecranon, intra-articular |
| S230z00 | Read | Closed fracture of proximal forearm not otherwise specified |
| S231.00 | Read | Open fracture of proximal radius and ulna |
| S231000 | Read | Open fracture of proximal forearm, unspecified |
| S231100 | Read | Open fracture olecranon, extra-articular |
| S231200 | Read | Open fracture of ulna, coronoid |
| S231300 | Read | Open Monteggia's fracture |
| S231500 | Read | Open fracture of the proximal ulna |
| S231600 | Read | Open fracture radial head |
| S231700 | Read | Open fracture radial neck |
| S231800 | Read | Open fracture proximal radius, comminuted |
| S231900 | Read | Open fracture of the proximal radius |
| S231A00 | Read | Open fracture radius and ulna, proximal |
| S231B00 | Read | Open fracture olecranon, intra-articular |
| S231z00 | Read | Open fracture of forearm, upper end, NOS |
| S233.00 | Read | Open fracture of radius and ulna, shaft |
| S233000 | Read | Open fracture of radius, shaft, unspecified |
| S233100 | Read | Open fracture of the radial shaft |
| S233200 | Read | Open fracture of the ulnar shaft |
| S233300 | Read | Open fracture radius and ulna, middle |
| S233z00 | Read | Open fracture of radius and ulna, shaft, NOS |
| S234211 | Read | Dupuytren's fracture, radius - closed |
| S234300 | Read | Closed fracture of ulna, styloid process |
| S234400 | Read | Closed fracture of ulna, lower epiphysis |
| S234G00 | Read | Greenstick fracture of distal radius |
| S235.00 | Read | Open fracture of radius and ulna, lower end |
| S235000 | Read | Open fracture of forearm, lower end, unspecified |
| S235200 | Read | Open fracture of the distal radius, unspecified |
| S235211 | Read | Dupuytren's fracture, radius - open |
| S235300 | Read | Open fracture of ulna, styloid process |
| S235400 | Read | Open fracture of ulna, lower epiphysis |
| S235500 | Read | Open fracture distal ulna - other |
| S235600 | Read | Open fracture radius and ulna, distal |
| S235800 | Read | Open Galeazzi fracture |
| S235C00 | Read | Open fracture distal radius, intra-articular, die-punch |
| S235D00 | Read | Open fracture distal radius, extra-articular other type |
| S235E00 | Read | Open fracture distal radius, intra-articular other type |
| S235z00 | Read | Open fracture of forearm, lower end, NOS |
| S23y.00 | Read | Open fracture of radius and ulna, unspecified part |
| S23y000 | Read | Open fracture of forearm, unspecified |
| S23y100 | Read | Open fracture of radius (alone), unspecified |
| S23y200 | Read | Open fracture of ulna (alone), unspecified |
| S23y300 | Read | Open fracture of the radius and ulna |
| S23yz00 | Read | Open fracture of radius and ulna, NOS |
| S293.00 | Read | Multiple fractures of forearm |
| S024000 | Read | Closed fracture maxilla |
| S020.00 | Read | Closed fracture nose |
| S024100 | Read | Closed fracture zygoma |
| 7K1LD00 | Read | Closed reduction of fracture of nasal bone |
| S02x000 | Read | Fracture of alveolus, closed |
| S01..00 | Read | Fracture of base of skull |
| S01z.00 | Read | Fracture of base of skull NOS |
| S02..00 | Read | Fracture of face bones |
| S022.12 | Read | Fracture of lower jaw, closed |
| S024.00 | Read | Fracture of malar or maxillary bones, closed |
| S028300 | Read | Fracture of mandible |
| S022.00 | Read | Fracture of mandible, closed |
| S022z00 | Read | Fracture of mandible, closed, NOS |
| S028000 | Read | Fracture of nasal bones |
| S02x100 | Read | Fracture of orbit NOS, closed |
| S028100 | Read | Fracture of orbital floor |
| S0...00 | Read | Fracture of skull |
| S02z.11 | Read | Jaw fracture NOS |
| S02B.00 | Read | Le Fort II fracture maxilla |
| S04..12 | Read | Multiple skull fractures |
| S01..15 | Read | Occiput bone fracture |
| S021.00 | Read | Open fracture nose |
| 7J03100 | Read | Reduction of fracture of nasal bones NEC other |
| 7J03200 | Read | Reduction of fracture of zygomatic bones |
| S03z.00 | Read | Skull fracture NOS |
| 7206100 | Read | Open reduction of fracture of orbit |
| 7206200 | Read | Removal of fixation from fracture of orbit |
| 7206400 | Read | Open reduction of fracture of orbit and internal fixation |
| 7206700 | Read | Packing of maxilla to correct blow-out fracture of orbit |
| 7206800 | Read | Internal fixation of fracture of orbit |
| 7403600 | Read | Outfracture of turbinates of nose |
| 7403900 | Read | Surgical outfracture of turbinate of nose |
| 7J02200 | Read | Elevation of depressed fracture of cranium |
| 7J02300 | Read | Repair of fracture of cranium NEC |
| 7J03.00 | Read | Reduction of fracture of facial bone |
| 7J03000 | Read | Reduction of fracture of nasoethmoid complex of bones |
| 7J03300 | Read | Reduction of closed fracture of orbit bone |
| 7J03y00 | Read | Other specified reduction of fracture of facial bone |
| 7J03z00 | Read | Reduction of fracture of facial bone NOS |
| 7J12.00 | Read | Reduction of fracture of mandible |
| 7J12.11 | Read | Reduction of fracture of jaw NEC |
| 7J12000 | Read | Reduction of fracture of alveolus of mandible |
| 7J12100 | Read | Open reduction of fracture of mandible NEC |
| 7J12200 | Read | Closed reduction of fracture of mandible NEC |
| 7J12y00 | Read | Other specified reduction of fracture of mandible |
| 7J12z00 | Read | Reduction of fracture of mandible NOS |
| 7J13.00 | Read | Reduction of fracture of maxilla |
| 7J13000 | Read | Reduction of fracture of alveolus of maxilla |
| 7J13100 | Read | Open reduction of fracture of maxilla NEC |
| 7J13200 | Read | Closed reduction of fracture of maxilla NEC |
| 7J13300 | Read | Reduction of blowout fracture of orbital floor |
| 7J13400 | Read | Reduction of Le Fort 1 fracture of maxilla |
| 7J13500 | Read | Reduction of Le Fort 2 fracture of maxilla |
| 7J13600 | Read | Reduction of Le Fort 3 fracture of maxilla |
| 7J13y00 | Read | Other specified reduction of fracture of maxilla |
| 7J13z00 | Read | Reduction of fracture of maxilla NOS |
| 7J17700 | Read | Traction for fracture of jaw |
| S000.00 | Read | Closed fracture vault of skull without intracranial injury |
| S001.00 | Read | Closed fracture vault of skull with intracranial injury |
| S002.00 | Read | Open fracture vault of skull without intracranial injury |
| S003.00 | Read | Open fracture vault of skull with intracranial injury |
| S01..11 | Read | Anterior fossa fracture |
| S01..12 | Read | Ethmoid sinus fracture |
| S01..13 | Read | Frontal sinus fracture |
| S01..14 | Read | Middle fossa fracture |
| S01..16 | Read | Orbital roof fracture |
| S01..17 | Read | Posterior fossa fracture |
| S01..18 | Read | Sphenoid bone fracture |
| S01..19 | Read | Temporal bone fracture |
| S010.00 | Read | Closed fracture base of skull without intracranial injury |
| S011.00 | Read | Closed fracture base of skull with intracranial injury |
| S012.00 | Read | Open fracture base skull without mention intracranial injury |
| S013.00 | Read | Open fracture base of skull with intracranial injury |
| S020.11 | Read | Closed fracture nasal bone |
| S021.11 | Read | Open fracture nasal bone |
| S022000 | Read | Closed fracture mandible (site unspecified) |
| S022100 | Read | Closed fracture of mandible, condylar process |
| S022200 | Read | Closed fracture of mandible, subcondylar |
| S022300 | Read | Closed fracture of mandible, coronoid process |
| S022400 | Read | Closed fracture of mandible, ramus, unspecified |
| S022500 | Read | Closed fracture of mandible, angle of jaw |
| S022600 | Read | Closed fracture of mandible, symphysis of body |
| S022700 | Read | Closed fracture of mandible, alveolar border of body |
| S022800 | Read | Closed fracture of mandible, body, other and unspecified |
| S022x00 | Read | Closed fracture of mandible, multiple sites |
| S023000 | Read | Open fracture mandible (site unspecified) |
| S023100 | Read | Open fracture of mandible, condylar process |
| S023200 | Read | Open fracture of mandible, subcondylar |
| S023400 | Read | Open fracture of mandible, ramus, unspecified |
| S023500 | Read | Open fracture of mandible, angle of jaw |
| S023600 | Read | Open fracture of mandible, symphysis of body |
| S023700 | Read | Open fracture of mandible, alveolar border of body |
| S023800 | Read | Open fracture of mandible, body, other and unspecified |
| S023x00 | Read | Open fracture of mandible, multiple sites |
| S025000 | Read | Open fracture maxilla |
| S025100 | Read | Open fracture zygoma |
| S026.00 | Read | Closed orbital blow-out fracture |
| S027.00 | Read | Open orbital blow-out fracture |
| S02A.00 | Read | Le Fort I fracture maxilla |
| S02C.00 | Read | Le Fort III fracture maxilla |
| S02x.00 | Read | Closed fracture other facial bone |
| S02y.00 | Read | Open fracture other facial bone |
| S03..00 | Read | Other and unqualified skull fractures |
| S030.00 | Read | Closed fracture of skull NOS without intracranial injury |
| S031.00 | Read | Closed fracture of skull NOS with intracranial injury |
| S033.00 | Read | Open fracture of skull NOS with intracranial injury |
| S03z.11 | Read | Depressed skull fracture NOS |
| S04..00 | Read | Multiple fractures involving skull or face with other bones |
| S04..11 | Read | Multiple face fractures |
| S044.00 | Read | Multiple fractures involving skull and facial bones |
| S04z.00 | Read | Multiple fractures involving skull/face with other bones NOS |
| 7K1J011 | Read | Cl red intracaps frac neck femur fix-Garden cannulated screw |
| 7K1J012 | Read | Cl red intracaps fract neck femur fix - Smith-Petersen nail |
| S300400 | Read | Closed fracture head of femur |
| S302011 | Read | Closed fracture of femur, greater trochanter |
| S302400 | Read | Closed fracture of femur, intertrochanteric |
| S302012 | Read | Closed fracture of femur, lesser trochanter |
| S300y11 | Read | Closed fracture of femur, subcapital |
| S300A00 | Read | Closed fracture of femur, upper epiphysis |
| S30y.00 | Read | Closed fracture of neck of femur NOS |
| S302.00 | Read | Closed fracture of proximal femur, pertrochanteric |
| S30w.00 | Read | Closed fracture of unspecified proximal femur |
| S300300 | Read | Closed fracture proximal femur, basicervical |
| S302100 | Read | Closed fracture proximal femur, intertrochanteric, two part |
| S300200 | Read | Closed fracture proximal femur, midcervical section |
| S300y00 | Read | Closed fracture proximal femur, other transcervical |
| S300600 | Read | Closed fracture proximal femur, subcapital, Garden grade I |
| S300700 | Read | Closed fracture proximal femur, subcapital, Garden grade II |
| S300800 | Read | Closed fracture proximal femur, subcapital, Garden grade III |
| S300900 | Read | Closed fracture proximal femur, subcapital, Garden grade IV |
| S300.00 | Read | Closed fracture proximal femur, transcervical |
| S300z00 | Read | Closed fracture proximal femur, transcervical, NOS |
| S300100 | Read | Closed fracture proximal femur, transepiphyseal |
| S300311 | Read | Closed fracture, base of neck of femur |
| 7K1L400 | Read | Closed reduction of fracture of hip |
| 7K1Jd00 | Read | Closed reduction of intracapsular # NOF internal fixat DHS |
| S302z00 | Read | Cls # of proximal femur, pertrochanteric section, NOS |
| S300000 | Read | Cls # prox femur, intracapsular section, unspecified |
| S300500 | Read | Cls # prox femur, subcapital, Garden grade unspec. |
| S302300 | Read | Cls # proximal femur, intertrochanteric, comminuted |
| S302000 | Read | Cls # proximal femur, trochanteric section, unspecified |
| 7K1J013 | Read | Cls red+int fxn prox femoral #+Richard's cannulat hip screw |
| 7K1J000 | Read | Cls red+int fxn proximal femoral #+screw/nail device alone |
| 7K1D01E | Read | DHS - Dynamic hip screw primary fixation of neck of femur |
| 7K1D01F | Read | Dynamic hip screw primary fixation of neck of femur |
| S30..00 | Read | Fracture of neck of femur |
| S30..11 | Read | Hip fracture |
| S30y.11 | Read | Hip fracture NOS |
| S303000 | Read | Open # of proximal femur, trochanteric section, unspecified |
| S301311 | Read | Open fracture base of neck of femur |
| S303400 | Read | Open fracture of femur, intertrochanteric |
| S301y11 | Read | Open fracture of femur, subcapital |
| S301A00 | Read | Open fracture of femur, upper epiphysis |
| S30z.00 | Read | Open fracture of neck of femur NOS |
| S303.00 | Read | Open fracture of proximal femur, pertrochanteric |
| S303z00 | Read | Open fracture of proximal femur, pertrochanteric, NOS |
| S30x.00 | Read | Open fracture of unspecified proximal femur |
| S303300 | Read | Open fracture proximal femur, intertrochanteric, comminuted |
| S303100 | Read | Open fracture proximal femur, intertrochanteric, two part |
| S301y00 | Read | Open fracture proximal femur, other transcervical |
| S301.00 | Read | Open fracture proximal femur, transcervical |
| S301100 | Read | Open fracture proximal femur, transepiphyseal |
| S301600 | Read | Open fracture proximal femur,subcapital, Garden grade I |
| S301700 | Read | Open fracture proximal femur,subcapital, Garden grade II |
| S301800 | Read | Open fracture proximal femur,subcapital, Garden grade III |
| S301900 | Read | Open fracture proximal femur,subcapital, Garden grade IV |
| S301500 | Read | Open fracture proximal femur,subcapital, Garden grade unspec |
| S301000 | Read | Opn # proximal femur, intracapsular section, unspecified |
| S304.00 | Read | Pertrochanteric fracture |
| 7K1JC00 | Read | Prim cls rd+int fxn prox fem #+screw/nail+intramdulry device |
| 7K1D013 | Read | Prim op red # nck femur & op fix - Deyerle multiple hip pin |
| 7K1D012 | Read | Prim op red # nck femur & op fix- Charnley compression screw |
| 7K1D01D | Read | Prim op red # nck femur & op fix- Zickel intramed nail plate |
| 7K1DE00 | Read | Prim op red frac neck fem op fix us prox fem nail antirotatn |
| 7K1D017 | Read | Prim open red # neck femur & op fix - McLaughlin nail plate |
| 7K1D011 | Read | Prim open reduct # neck femur & op fix - Blount nail plate |
| 7K1D014 | Read | Prim open reduct # neck femur & op fix - Holt nail |
| 7K1D015 | Read | Prim open reduct # neck femur & op fix - Jewett nail plate |
| 7K1D018 | Read | Prim open reduct # neck femur & op fix - Neufield nail plate |
| 7K1D019 | Read | Prim open reduct # neck femur & op fix - Pugh nail plate |
| 7K1D01A | Read | Prim open reduct # neck femur & op fix - Richards screw |
| 7K1D01B | Read | Prim open reduct # neck femur & op fix - Ross Brown nail |
| 7K1JB00 | Read | Primary cls red+int fxn prox fem #+screw/nail device alone |
| 7K1JD00 | Read | Primary cls red+int fxn prox fem #+screw/nail+plate device |
| 7K1K500 | Read | Primary cls reduction+external fixation proximal femoral # |
| 7K1K300 | Read | Primary external fixation(without reduction) prox femoral # |
| 7K1J500 | Read | Primary int fxn(no red) prox fem #+screw/nail device alone |
| 7K1J700 | Read | Primary int fxn(no red) prox fem #+screw/nail+plate device |
| 7K1J600 | Read | Primary int fxn(no red) prox fem #+scrw/nail+intramed device |
| 7K1G200 | Read | Primary open reduction+external fixation of femoral fracture |
| 7K1D700 | Read | Prmy open red+int fxn prox fem #+screw/nail+intramed device |
| 7K1D600 | Read | Prmy open red+int fxn prox femoral #+screw/nail device alone |
| 7K1D000 | Read | Prmy open red+int fxn prox femoral #+screw/nail+plate device |
| S130000 | Read | Closed fracture acetabulum, anterior lip alone |
| S130100 | Read | Closed fracture acetabulum, posterior lip alone |
| S130200 | Read | Closed fracture acetabulum, anterior column |
| S130300 | Read | Closed fracture acetabulum, posterior column |
| S130400 | Read | Closed fracture acetabulum, floor |
| S130600 | Read | Closed fracture acetabulum, double column unspecified |
| S130y00 | Read | Other specified closed fracture acetabulum |
| S130z00 | Read | Closed fracture acetabulum NOS |
| S131.00 | Read | Open fracture acetabulum |
| S131y00 | Read | Other specified open fracture acetabulum |
| S131z00 | Read | Open fracture acetabulum NOS |
| S301400 | Read | Open fracture head, femur |
| S303011 | Read | Open fracture of femur, greater trochanter |
| S4E0.00 | Read | Closed fracture-dislocation, hip joint |
| S4E1.00 | Read | Open fracture-dislocation, hip joint |
| S4E2.00 | Read | Closed fracture-subluxation, hip joint |
| S3...00 | Read | Fracture of lower limb |
| S3...11 | Read | Leg fracture |
| 7K1LC00 | Read | Closed reduction of fracture of lower limb |
| S370.00 | Read | Closed fracture of lower limb, level unspecified |
| S371.00 | Read | Open fracture of lower limb, level unspecified |
| S3x..00 | Read | Other, multiple and ill-defined fractures of lower limb |
| S3x0.00 | Read | Other, multiple and ill-defined closed fractures lower limb |
| S3x1.00 | Read | Other, multiple and ill-defined open fractures of lower limb |
| SR15000 | Read | Cl fractures involving multiple regions upper with lower lmb |
| SyuL400 | Read | [X]Sequelae of other fractures of lower limb |
| S130.00 | Read | Closed fracture acetabulum |
| S104.00 | Read | Closed fracture lumbar vertebra |
| S104000 | Read | Closed fracture lumbar vertebra, burst |
| S104500 | Read | Closed fracture lumbar vertebra, posterior arch |
| S104300 | Read | Closed fracture lumbar vertebra, spinous process |
| S104200 | Read | Closed fracture lumbar vertebra, spondylolysis |
| S104400 | Read | Closed fracture lumbar vertebra, transverse process |
| S104600 | Read | Closed fracture lumbar vertebra, tricolumnar |
| S104100 | Read | Closed fracture lumbar vertebra, wedge |
| S114.00 | Read | Closed fracture of lumbar spine with spinal cord lesion |
| S13y.00 | Read | Closed fracture of pelvis NOS |
| S134600 | Read | Closed fracture pelvis, iliac wing |
| S134100 | Read | Closed fracture pelvis, ischium |
| S132100 | Read | Closed fracture pelvis, multiple pubic rami - stable |
| S132000 | Read | Closed fracture pelvis, single pubic ramus |
| S132.00 | Read | Closed fracture pubis |
| S132z00 | Read | Closed fracture pubis NOS |
| S4J0100 | Read | Closed fracture-dislocation of pelvis |
| S4J2100 | Read | Closed fracture-subluxation of pelvis |
| N331111 | Read | Collapse of lumbar vertebra |
| N331G00 | Read | Collapse of lumbar vertebra |
| N331J00 | Read | Collapse of lumbar vertebra due to osteoporosis |
| S10B400 | Read | Fracture of acetabulum |
| S10B200 | Read | Fracture of coccyx |
| S10B.00 | Read | Fracture of lumbar spine and pelvis |
| S10B000 | Read | Fracture of lumbar vertebra |
| S10B500 | Read | Fracture of pubis |
| S13..00 | Read | Fracture or disruption of pelvis |
| SR11.00 | Read | Fractures involving thorax with lower back and pelvis |
| S10B600 | Read | Multiple fractures of lumbar spine and pelvis |
| S13z.00 | Read | Open fracture of pelvis NOS |
| S134.00 | Read | Other or multiple closed fracture of pelvis |
| S134z00 | Read | Other or multiple closed fracture of pelvis NOS |
| N331100 | Read | Pathological fracture of lumbar vertebra |
| S105.00 | Read | Open fracture lumbar vertebra |
| S105000 | Read | Open fracture lumbar vertebra, burst |
| S105100 | Read | Open fracture lumbar vertebra, wedge |
| S105400 | Read | Open fracture lumbar vertebra, transverse process |
| S106.00 | Read | Closed fracture sacrum |
| S106000 | Read | Closed compression fracture sacrum |
| S106100 | Read | Closed vertical fracture of sacrum |
| S107.00 | Read | Open fracture sacrum |
| S107000 | Read | Open compression fracture sacrum |
| S107100 | Read | Open vertical fracture of sacrum |
| S108.00 | Read | Closed fracture pelvis, coccyx |
| S109.00 | Read | Open fracture pelvis, coccyx |
| S115.00 | Read | Open fracture of lumbar spine with spinal cord lesion |
| S116.00 | Read | Closed fracture of sacrum with spinal cord lesion |
| S116z00 | Read | Closed fracture of sacrum with spinal cord lesion NOS |
| S117.00 | Read | Open fracture of sacrum with spinal cord lesion |
| S117300 | Read | Open fracture of sacrum with other spinal cord injury |
| S118.00 | Read | Closed fracture of coccyx with spinal cord lesion |
| S118z00 | Read | Closed fracture of coccyx with spinal cord lesion NOS |
| S132200 | Read | Closed fracture pelvis, multiple pubic rami - unstable |
| S132y00 | Read | Other specified closed fracture pubis |
| S133.00 | Read | Open fracture of pubis |
| S133000 | Read | Open fracture pelvis, single pubic ramus |
| S133100 | Read | Open fracture pelvis, multiple pubic rami - stable |
| S133200 | Read | Open fracture pelvis, multiple pubic rami - unstable |
| S133y00 | Read | Other specified open fracture of pubis |
| S133z00 | Read | Open fracture of pubis NOS |
| S134000 | Read | Closed fracture of ilium, unspecified |
| S134300 | Read | Closed fracture pelvis, ischial tuberosity |
| S134400 | Read | Closed fracture pelvis, anterior superior iliac spine |
| S134500 | Read | Closed fracture pelvis, anterior inferior iliac spine |
| S134700 | Read | Closed vertical fracture of ilium |
| S134800 | Read | Closed fracture dislocation of sacro-iliac joint |
| S135.00 | Read | Other or multiple open fracture of pelvis |
| S135000 | Read | Open fracture of ilium, unspecified |
| S135100 | Read | Open fracture pelvis, ischium |
| S135300 | Read | Open fracture pelvis, ischial tuberosity |
| S135400 | Read | Open fracture pelvis, anterior superior iliac spine |
| S135600 | Read | Open fracture pelvis, iliac wing |
| S135800 | Read | Open fracture dislocation of sacro-iliac joint |
| S135y00 | Read | Other open fracture of pelvis |
| S135z00 | Read | Other/multiple open fracture of pelvis NOS |
| S4J1100 | Read | Open fracture-dislocation of pelvis |
| S4J3100 | Read | Open fracture-subluxation of pelvis |
| S344.00 | Read | Closed fracture ankle, bimalleolar |
| S342.00 | Read | Closed fracture ankle, lateral malleolus |
| S34x.00 | Read | Closed fracture ankle, unspecified |
| S334.00 | Read | Closed fracture distal tibia |
| S334000 | Read | Closed fracture distal tibia, extra-articular |
| S339000 | Read | Closed fracture of distal fibula |
| S33x100 | Read | Closed fracture of fibula, unspecified part, NOS |
| S330.00 | Read | Closed fracture of tibia and fibula, proximal |
| S33x200 | Read | Closed fracture of tibia and fibula, unspecified part |
| S33x000 | Read | Closed fracture of tibia, unspecified part, NOS |
| S332.00 | Read | Closed fracture of tibia/fibula, shaft |
| S320400 | Read | Closed fracture patella, comminuted (stellate) |
| S330100 | Read | Closed fracture proximal fibula |
| S330300 | Read | Closed fracture proximal tibia, medial condyle (plateau) |
| S332100 | Read | Closed fracture shaft of fibula |
| S4F0.00 | Read | Closed fracture-dislocation, knee joint |
| S4F2.00 | Read | Closed fracture-subluxation, knee joint |
| 7K1L800 | Read | Closed reduction of fracture of ankle |
| 7K1L600 | Read | Closed reduction of fracture of knee |
| 7K1L700 | Read | Closed reduction of fracture of tibia and or fibula |
| S34..00 | Read | Fracture of ankle |
| S34z.00 | Read | Fracture of ankle, NOS |
| S339.00 | Read | Fracture of fibula alone |
| S349.00 | Read | Fracture of lateral malleolus |
| S338.00 | Read | Fracture of lower end of tibia |
| S35..00 | Read | Fracture of one or more tarsal and metatarsal bones |
| S32..00 | Read | Fracture of patella |
| S32z.00 | Read | Fracture of patella, NOS |
| S337.00 | Read | Fracture of shaft of tibia |
| S33..00 | Read | Fracture of tibia and fibula |
| S336.00 | Read | Fracture of upper end of tibia |
| S4F..00 | Read | Fracture-dislocation or subluxation knee |
| S3x3.00 | Read | Multiple fractures of lower leg |
| S345.00 | Read | Open fracture ankle, bimalleolar |
| S339100 | Read | Open fracture of distal fibula |
| S33yz00 | Read | Open fracture of tibia and fibula, unspecified part, NOS |
| S33y000 | Read | Open fracture of tibia, unspecified part, NOS |
| S3xz.00 | Read | Other, multiple and ill-defined fractures of lower limb NOS |
| S344.12 | Read | Pott's fracture - ankle |
| 7K1F500 | Read | Primary open reduction fracture patella fixat tension band |
| S320.00 | Read | Closed fracture of the patella |
| S320000 | Read | Closed fracture patella, transverse |
| S320100 | Read | Closed fracture patella, proximal pole |
| S320200 | Read | Closed fracture patella, distal pole |
| S320300 | Read | Closed fracture patella, vertical |
| S321.00 | Read | Open fracture of the patella |
| S321000 | Read | Open fracture patella, transverse |
| S321100 | Read | Open fracture patella, proximal pole |
| S321200 | Read | Open fracture patella, distal pole |
| S321400 | Read | Open fracture patella, comminuted (stellate) |
| S330000 | Read | Closed fracture of the proximal tibia |
| S330011 | Read | Closed fracture of tibial condyles |
| S330012 | Read | Closed fracture of tibial tuberosity |
| S330200 | Read | Closed fracture of tibia and fibula, proximal |
| S330400 | Read | Closed fracture proximal tibia, lateral condyle (plateau) |
| S330500 | Read | Closed fracture proximal tibia, bicondylar |
| S330600 | Read | Closed fracture spine, tibia |
| S330700 | Read | Closed fracture tubercle, tibia |
| S330800 | Read | Closed fracture fibula, head |
| S330900 | Read | Closed fracture fibula, neck |
| S330z00 | Read | Closed fracture of tibia and fibula, proximal NOS |
| S331.00 | Read | Open fracture of tibia and fibula, proximal |
| S331000 | Read | Open fracture of the proximal tibia |
| S331011 | Read | Open fracture of tibial condyles |
| S331012 | Read | Open fracture of tibial tuberosity |
| S331100 | Read | Open fracture proximal fibula |
| S331200 | Read | Open fracture of tibia and fibula, proximal |
| S331300 | Read | Open fracture proximal tibia, medial condyle (plateau) |
| S331400 | Read | Open fracture proximal tibia, lateral condyle (plateau) |
| S331600 | Read | Open fracture spine, tibia |
| S331700 | Read | Open fracture tubercle, tibia |
| S331800 | Read | Open fracture fibula, head |
| S331900 | Read | Open fracture fibula, neck |
| S331A00 | Read | Open fracture tibial plateau |
| S331z00 | Read | Open fracture of tibia and fibula, proximal NOS |
| S332000 | Read | Closed fracture shaft of tibia |
| S332200 | Read | Closed fracture of tibia and fibula, shaft |
| S332z00 | Read | Closed fracture of tibia and fibula, shaft, NOS |
| S333.00 | Read | Open fracture of tibia/fibula, shaft |
| S333000 | Read | Open fracture shaft of tibia |
| S333100 | Read | Open fracture shaft of fibula |
| S333200 | Read | Open fracture of tibia and fibula, shaft |
| S333z00 | Read | Open fracture of tibia and fibula, shaft, NOS |
| S334100 | Read | Closed fracture distal tibia, intra-articular |
| S335.00 | Read | Open fracture distal tibia |
| S335000 | Read | Open fracture distal tibia, extra-articular |
| S335100 | Read | Open fracture distal tibia, intra-articular |
| S33B.00 | Read | Open fracture of distal tibia and fibula |
| S33C.00 | Read | Closed fracture of distal tibia and fibula |
| S33x.00 | Read | Closed fracture of tibia and fibula, unspecified part, NOS |
| S33x.11 | Read | Lower leg fracture NOS |
| S33xz00 | Read | Closed fracture of tibia and fibula, unspecified part, NOS |
| S33y.00 | Read | Open fracture of tibia and fibula, unspecified part, NOS |
| S33y100 | Read | Open fracture of fibula, unspecified part, NOS |
| S33y200 | Read | Open fracture of tibia and fibula, unspecified part |
| S340.00 | Read | Closed fracture ankle, medial malleolus |
| S341.00 | Read | Open fracture ankle, medial malleolus |
| S342000 | Read | Closed fracture ankle, lateral malleolus, low |
| S342100 | Read | Closed fracture ankle, lateral malleolus, high |
| S343.00 | Read | Open fracture ankle, lateral malleolus |
| S343000 | Read | Open fracture ankle, lateral malleolus, low |
| S343100 | Read | Open fracture ankle, lateral malleolus, high |
| S344.11 | Read | Dupuytren's fracture, fibula |
| S344000 | Read | Closed fracture ankle, bimalleolar, low fibular fracture |
| S344100 | Read | Closed fracture ankle, bimalleolar, high fibular fracture |
| S345000 | Read | Open fracture ankle, bimalleolar, low fibular fracture |
| S345100 | Read | Open fracture ankle, bimalleolar, high fibular fracture |
| S346.00 | Read | Closed fracture ankle, trimalleolar |
| S346000 | Read | Closed fracture ankle, trimalleolar, low fibular fracture |
| S346100 | Read | Closed fracture ankle, trimalleolar, high fibular fracture |
| S347.00 | Read | Open fracture ankle, trimalleolar |
| S347000 | Read | Open fracture ankle, trimalleolar, low fibular fracture |
| S347100 | Read | Open fracture ankle, trimalleolar, high fibular fracture |
| S34y.00 | Read | Open fracture ankle, unspecified |
| S4F1.00 | Read | Open fracture-dislocation, knee joint |
| S4F3.00 | Read | Open fracture-subluxation, knee joint |
| S4F4.00 | Read | Closed fracture-dislocation, patello-femoral joint |
| S4F5.00 | Read | Open fracture-dislocation, patello-femoral joint |
| S4F6.00 | Read | Closed fracture-subluxation, patello-femoral joint |
| S4F7.00 | Read | Open fracture-subluxation, patello-femoral joint |
| S4G0.00 | Read | Closed fracture-dislocation, ankle joint |
| S4G1.00 | Read | Open fracture-dislocation, ankle joint |
| S4G2.00 | Read | Closed fracture-subluxation, ankle joint |
| S4G3.00 | Read | Open fracture-subluxation, ankle joint |
| SC0X.00 | Read | Sequelae of other fracture of thorax and pelvis |
| SR10000 | Read | Closed fractures involving head with neck |
| SR16000 | Read | Closed fracture inv thorax wth low back and pelvis and limbs |
| SR1z.00 | Read | Multiple fractures, unspecified |
| SR1z000 | Read | [X]Closed multiple fractures unspecified |
| SR1z100 | Read | [X]Open multiple fractures unspecified |
| S100.00 | Read | Closed fracture of cervical spine |
| S110.00 | Read | Closed fracture of cervical spine with cord lesion |
| N331E00 | Read | Collapse of cervical vertebra |
| N331H00 | Read | Collapse of cervical vertebra due to osteoporosis |
| S10A000 | Read | Fracture of first cervical vertebra |
| S10A.00 | Read | Fracture of neck |
| S10A100 | Read | Fracture of second cervical vertebra |
| S10A200 | Read | Multiple fractures of cervical spine |
| N331A00 | Read | Osteoporosis + pathological fracture cervical vertebrae |
| N331C00 | Read | Pathological fracture of cervical vertebra |
| S100000 | Read | Closed fracture of unspecified cervical vertebra |
| S100100 | Read | Closed fracture atlas |
| S100111 | Read | C1 vertebra closed fracture - no spinal cord lesion |
| S100200 | Read | Closed fracture axis |
| S100211 | Read | C2 vertebra closed fracture without spinal cord lesion |
| S100300 | Read | Closed fracture of third cervical vertebra |
| S100311 | Read | C3 vertebra closed fracture without spinal cord lesion |
| S100400 | Read | Closed fracture of fourth cervical vertebra |
| S100411 | Read | C4 vertebra closed fracture without spinal cord lesion |
| S100500 | Read | Closed fracture of fifth cervical vertebra |
| S100511 | Read | C5 vertebra closed fracture without spinal cord lesion |
| S100600 | Read | Closed fracture of sixth cervical vertebra |
| S100611 | Read | C6 vertebra closed fracture without spinal cord lesion |
| S100700 | Read | Closed fracture of seventh cervical vertebra |
| S100711 | Read | C7 vertebra closed fracture without spinal cord lesion |
| S100800 | Read | Closed fracture atlas, isolated arch or articular process |
| S100900 | Read | Closed fracture atlas, comminuted |
| S100A00 | Read | Closed fracture axis, odontoid process |
| S100B00 | Read | Closed fracture axis, spondylolysis |
| S100C00 | Read | Closed fracture axis, spinous process |
| S100D00 | Read | Closed fracture axis, transverse process |
| S100E00 | Read | Closed fracture axis, posterior arch |
| S100G00 | Read | Closed fracture cervical vertebra, burst |
| S100H00 | Read | Closed fracture cervical vertebra, wedge |
| S100J00 | Read | Closed fracture cervical vertebra, spondylolysis |
| S100K00 | Read | Closed fracture cervical vertebra, spinous process |
| S100L00 | Read | Closed fracture cervical vertebra, transverse process |
| S100M00 | Read | Closed fracture cervical vertebra, posterior arch |
| S100x00 | Read | Multiple closed fractures of cervical vertebrae |
| S100z00 | Read | Closed fracture of cervical spine not otherwise specified |
| S101.00 | Read | Open fracture of cervical spine |
| S101000 | Read | Open fracture of unspecified cervical vertebra |
| S101100 | Read | Open fracture atlas |
| S101111 | Read | C1 vertebra open fracture without spinal cord lesion |
| S101200 | Read | Open fracture axis |
| S101211 | Read | C2 vertebra open fracture without spinal cord lesion |
| S101311 | Read | C3 vertebra open fracture without spinal cord lesion |
| S101500 | Read | Open fracture of fifth cervical vertebra |
| S101511 | Read | C5 vertebra open fracture without spinal cord lesion |
| S101600 | Read | Open fracture of sixth cervical vertebra |
| S101611 | Read | C6 vertebra open fracture without spinal cord lesion |
| S101711 | Read | C7 vertebra open fracture without spinal cord lesion |
| S101900 | Read | Open fracture atlas, comminuted |
| S101A00 | Read | Open fracture axis, odontoid process |
| S101x00 | Read | Multiple open fractures of cervical vertebrae |
| S125100 | Read | Closed fracture of hyoid bone |
| S126100 | Read | Open fracture of hyoid bone |
| Syu4300 | Read | [X]Fracture of other parts of shoulder and upper arm |
| Syu4400 | Read | [X]Fracture of shoulder and upper arm, unspecified |
| S200300 | Read | Closed fracture clavicle, lateral end |
| S224100 | Read | Closed fracture distal humerus, supracondylar |
| S200.00 | Read | Closed fracture of clavicle |
| S224500 | Read | Closed fracture of distal humerus, trochlea |
| S224000 | Read | Closed fracture of elbow, unspecified part |
| S222000 | Read | Closed fracture of humerus NOS |
| S222100 | Read | Closed fracture of humerus, shaft |
| S222.00 | Read | Closed fracture of humerus, shaft or unspecified part |
| S222z00 | Read | Closed fracture of humerus, shaft or unspecified part NOS |
| S220500 | Read | Closed fracture of humerus, upper epiphysis |
| S220z00 | Read | Closed fracture of proximal humerus not otherwise specified |
| S220200 | Read | Closed fracture of proximal humerus, anatomical neck |
| S220000 | Read | Closed fracture of proximal humerus, unspecified part |
| S224.00 | Read | Closed fracture of the distal humerus |
| S220.00 | Read | Closed fracture of the proximal humerus |
| S220700 | Read | Closed fracture proximal humerus, four part |
| S220300 | Read | Closed fracture proximal humerus, greater tuberosity |
| S220400 | Read | Closed fracture proximal humerus, head |
| S220100 | Read | Closed fracture proximal humerus, neck |
| S220600 | Read | Closed fracture proximal humerus, three part |
| S210100 | Read | Closed fracture scapula, acromion |
| S210300 | Read | Closed fracture scapula, glenoid |
| S4A0.00 | Read | Closed fracture-dislocation shoulder |
| S4C2000 | Read | Closed fracture-subluxation, distal radio-ulnar jt |
| 7K1LG00 | Read | Closed reduction of fracture of shoulder |
| S20..11 | Read | Collar bone fracture |
| S224.11 | Read | Elbow fracture - closed |
| S20..00 | Read | Fracture of clavicle |
| S22..00 | Read | Fracture of humerus |
| S22z.00 | Read | Fracture of humerus NOS |
| S228.00 | Read | Fracture of lower end of humerus |
| S21..00 | Read | Fracture of scapula |
| S227.00 | Read | Fracture of shaft of humerus |
| S226.00 | Read | Fracture of upper end of humerus |
| S2...00 | Read | Fracture of upper limb |
| S4A..00 | Read | Fracture-dislocation or subluxation shoulder |
| S292.00 | Read | Multiple fractures of clavicle, scapula and humerus |
| 7K1LF00 | Read | Closed reduction of fracture of humerus |
| 7K1LN00 | Read | Closed reduction of fracture of upper limb |
| S200000 | Read | Closed fracture of clavicle, unspecified part |
| S200100 | Read | Closed fracture clavicle, medial end |
| S200200 | Read | Closed fracture clavicle, shaft |
| S200z00 | Read | Closed fracture of clavicle NOS |
| S201.00 | Read | Open fracture of clavicle |
| S201000 | Read | Open fracture of clavicle, unspecified part |
| S201100 | Read | Open fracture clavicle, medial end |
| S201200 | Read | Open fracture clavicle, shaft |
| S201300 | Read | Open fracture clavicle, lateral end |
| S201z00 | Read | Open fracture of clavicle NOS |
| S21..11 | Read | Shoulder blade fracture |
| S210.00 | Read | Closed fracture of scapula |
| S210000 | Read | Closed fracture of scapula, unspecified part |
| S210200 | Read | Closed fracture scapula, coracoid |
| S210400 | Read | Closed fracture scapula, blade |
| S210500 | Read | Closed fracture scapula, spine |
| S210600 | Read | Closed fracture scapula, neck |
| S210z00 | Read | Closed fracture of scapula NOS |
| S211.00 | Read | Open fracture of scapula |
| S211000 | Read | Open fracture of scapula, unspecified part |
| S211100 | Read | Open fracture scapula, acromion |
| S211200 | Read | Open fracture scapula, coracoid |
| S211300 | Read | Open fracture scapula, glenoid |
| S211400 | Read | Open fracture scapula, blade |
| S211600 | Read | Open fracture scapula, neck |
| S211z00 | Read | Open fracture of scapula NOS |
| S221.00 | Read | Open fracture of the proximal humerus |
| S221.11 | Read | Shoulder fracture - open |
| S221000 | Read | Open fracture of proximal humerus, unspecified part |
| S221100 | Read | Open fracture proximal humerus, neck |
| S221200 | Read | Open fracture of proximal humerus, anatomical neck |
| S221300 | Read | Open fracture proximal humerus, greater tuberosity |
| S221400 | Read | Open fracture proximal humerus, head |
| S221500 | Read | Open fracture of humerus, upper epiphysis |
| S221600 | Read | Open fracture proximal humerus, three part |
| S221700 | Read | Open fracture proximal humerus, four part |
| S221z00 | Read | Open fracture of proximal humerus not otherwise specified |
| S223.00 | Read | Open fracture of humerus, shaft or unspecified part |
| S223000 | Read | Open fracture of humerus NOS |
| S223100 | Read | Open fracture of humerus, shaft |
| S223z00 | Read | Open fracture of humerus, shaft or unspecified part NOS |
| S224200 | Read | Closed fracture distal humerus, lateral condyle |
| S224300 | Read | Closed fracture distal humerus, medial condyle |
| S224400 | Read | Closed fracture of distal humerus, condyle(s) unspecified |
| S224600 | Read | Closed fracture distal humerus, lateral epicondyle |
| S224700 | Read | Closed fracture distal humerus, medial epicondyle |
| S224800 | Read | Closed fracture distal humerus, capitellum |
| S224900 | Read | Closed fracture distal humerus, bicondylar (T-Y fracture) |
| S224x00 | Read | Closed fracture of distal humerus, multiple |
| S224z00 | Read | Closed fracture of distal humerus, not otherwise specified |
| S225.00 | Read | Open fracture of the distal humerus |
| S225.11 | Read | Elbow fracture - open |
| S225000 | Read | Open fracture of elbow, unspecified part |
| S225100 | Read | Open fracture distal humerus, supracondylar |
| S225200 | Read | Open fracture distal humerus, lateral condyle |
| S225300 | Read | Open fracture distal humerus, medial condyle |
| S225400 | Read | Open fracture of distal humerus, condyle(s) unspecified |
| S225500 | Read | Open fracture of distal humerus, trochlea |
| S225600 | Read | Open fracture distal humerus, lateral epicondyle |
| S225700 | Read | Open fracture distal humerus, medial epicondyle |
| S225800 | Read | Open fracture distal humerus, capitellum |
| S225900 | Read | Open fracture distal humerus, bicondylar (T-Y fracture) |
| S225x00 | Read | Open fracture of distal humerus, multiple |
| S225z00 | Read | Open fracture of distal humerus, not otherwise specified |
| S292000 | Read | Closed multiple fractures of clavicle, scapula and humerus |
| S292100 | Read | Open multiple fractures of clavicle, scapula and humerus |
| S4A0000 | Read | Closed fracture-dislocation shoulder joint |
| S4A0100 | Read | Closed fracture-dislocation acromio-clavicular joint |
| S4A1.00 | Read | Open fracture-dislocation shoulder |
| S4A1000 | Read | Open fracture-dislocation shoulder joint |
| S4A1100 | Read | Open fracture-dislocation acromio-clavicular joint |
| S4A2.00 | Read | Closed fracture-subluxation shoulder |
| S4A2000 | Read | Closed fracture-subluxation shoulder joint |
| S4A2100 | Read | Closed fracture-subluxation acromio-clavicular joint |
| S4A3.00 | Read | Open fracture-subluxation shoulder |
| S4A3100 | Read | Open fracture-subluxation acromio-clavicular joint |
| S4B0.00 | Read | Closed fracture-dislocation elbow |
| S4B0000 | Read | Closed fracture-dislocation elbow joint |
| S4B0100 | Read | Closed fracture-dislocation superior radio-ulnar joint |
| S4B1.00 | Read | Open fracture-dislocation elbow |
| S4B1000 | Read | Open fracture-dislocation elbow joint |
| S4B1100 | Read | Open fracture-dislocation superior radio-ulnar joint |
| S4B2.00 | Read | Closed fracture-subluxation elbow |
| S4B2000 | Read | Closed fracture-subluxation elbow joint |
| S4B2100 | Read | Closed fracture-subluxation superior radio-ulnar joint |
| S4B3.00 | Read | Open fracture-subluxation elbow |
| Syu4200 | Read | [X]Multiple fractures of clavicle, scapula and humerus |
| Nyu6700 | Read | [X]Collapsed vertebra in diseases classified elsewhere |
| 7J41500 | Read | Balloon kyphoplasty of fracture of spine |
| S11x.00 | Read | Closed fracture of spine with spinal cord lesion unspecified |
| S10x.00 | Read | Closed fracture of spine, unspecified, |
| S112z00 | Read | Closed fracture of thoracic spine with cord lesion NOS |
| S114100 | Read | Closed spinal fracture with complete lumbar cord lesion |
| S114000 | Read | Closed spinal fracture with unspecified lumbar cord lesion |
| S112700 | Read | Cls spinal fracture with complete thorac cord lesion, T7-12 |
| S112A00 | Read | Cls spinal fracture with posterior thorac cord lesion, T7-12 |
| S112600 | Read | Cls spinal fracture with unspec thoracic cord lesion, T7-12 |
| S112000 | Read | Cls spinal fracture with unspec thoracic cord lesion,T1-6 |
| S112100 | Read | Cls spinal fracture wth complete thoracic cord lesion,T1-6 |
| N331.11 | Read | Collapse of spine NOS |
| N331L00 | Read | Collapse of vertebra due to osteoporosis NOS |
| N331.12 | Read | Collapse of vertebra NOS |
| N331D00 | Read | Collapsed vertebra NOS |
| 7J41.00 | Read | Decompression of fracture of spine |
| N1y1.00 | Read | Fatigue fracture of vertebra |
| 7J43100 | Read | Fixation of fracture of spine using Harrington rod |
| S11..00 | Read | Fracture of spine with spinal cord lesion |
| S11z.00 | Read | Fracture of spine with spinal cord lesion NOS |
| S10..00 | Read | Fracture of spine without mention of spinal cord injury |
| S10z.00 | Read | Fracture of spine without mention of spinal cord lesion NOS |
| S10..11 | Read | Fracture of transverse process spine - no spinal cord lesion |
| S11..12 | Read | Fracture of vertebra with spinal cord lesion |
| S10..12 | Read | Fracture of vertebra without spinal cord lesion vert |
| 14G8.00 | Read | H/O: vertebral fracture |
| 7J42400 | Read | Halo skull traction for fracture of spine |
| N331800 | Read | Osteoporosis + pathological fracture lumbar vertebrae |
| N331900 | Read | Osteoporosis + pathological fracture thoracic vertebrae |
| N331.14 | Read | Osteoporotic vertebral collapse |
| 7J41000 | Read | Complex decompression of fracture of spine |
| 7J41100 | Read | Anterior decompression of fracture of spine |
| 7J41200 | Read | Posterior decompression of fracture of spine |
| 7J41300 | Read | Vertebroplasty of fracture of spine |
| 7J41400 | Read | Posterior decompression of fracture of spine NEC |
| 7J41y00 | Read | Other specified decompression of fracture of spine |
| 7J41z00 | Read | Decompression of fracture of spine NOS |
| 7J42.00 | Read | Other reduction of fracture of spine |
| 7J42.11 | Read | Other reduction of fracture of spine and stabilisation |
| 7J42000 | Read | Open reduction of fracture of spine & excis facet of spine |
| 7J42100 | Read | Open reduction of fracture of spine NEC |
| 7J42200 | Read | Manipulative reduction of fracture of spine |
| 7J42300 | Read | Spinal extension traction for fracture of spine |
| 7J42500 | Read | Spinal traction for fracture of spine NEC |
| 7J42600 | Read | Primary bedrest stabilisation of spinal fracture |
| 7J42700 | Read | Primary collar stabilisation of spinal fracture |
| 7J42900 | Read | Primary cast stabilisation of spinal fracture |
| 7J42B00 | Read | Primary other external stabilisation of spinal fracture |
| 7J42C00 | Read | Revision to bedrest stabilisation of spinal fracture |
| 7J42D00 | Read | Revision to collar stabilisation of spinal fracture |
| 7J42G00 | Read | Revision to external fixation stabilisation spinal fracture |
| 7J42J00 | Read | Primary closed reduction spinal fracture alone |
| 7J42L00 | Read | Primary cls reduction spinal fracture+bedrest stabilisation |
| 7J42M00 | Read | Primary cls reduc spinal fracture+skull traction stabilisatn |
| 7J42y00 | Read | Other specified other reduction of fracture of spine |
| 7J42z00 | Read | Other reduction of fracture of spine NOS |
| 7J43.00 | Read | Fixation of fracture of spine |
| 7J43.11 | Read | Internal fixation of fracture of spine |
| 7J43000 | Read | Primary open reduc spinal fracture+internal fix+plate |
| 7J43200 | Read | Fixation of fracture of spine and skull traction HFQ |
| 7J43211 | Read | Barr skull traction for fracture of spine |
| 7J43300 | Read | Primary open reduc spinal fracture+internal fix+wire |
| 7J43400 | Read | Primary open reduc spinal fracture+internal fix+rod system |
| 7J43700 | Read | Primary open reduc spinal fracture+other internal fix |
| 7J43900 | Read | Rvsn open reduc spinal fracture+internal fix+plate |
| 7J43A00 | Read | Rvsn open reduc spinal fracture+internal fix+rod system |
| 7J43C00 | Read | Rvsn open reduc spinal fracture+internal fix+internl fixator |
| 7J43E00 | Read | Removal of fracture fixation device from spine |
| 7J43y00 | Read | Other specified fixation of fracture of spine |
| 7J43z00 | Read | Fixation of fracture of spine NOS |
| S10y.00 | Read | Open fracture of spine, unspecified, |
| S110000 | Read | Cls spinal fracture with unspec cervical cord lesion, C1-4 |
| S110100 | Read | Cls spinal fracture with complete cervcl cord lesion, C1-4 |
| S110600 | Read | Cls spinal fracture with unspec cervical cord lesion, C5-7 |
| S110700 | Read | Cls spinal fracture with complete cervcl cord lesion, C5-7 |
| S110800 | Read | Cls spinal fracture with anterior cervcl cord lesion, C5-7 |
| S110z00 | Read | Closed fracture of cervical spine with cord lesion NOS |
| S111.00 | Read | Open fracture of cervical spine with spinal cord lesion |
| S113.00 | Read | Open fracture of thoracic spine with spinal cord lesion |
| S113000 | Read | Opn spinal fracture with unspec thoracic cord lesion, T1-6 |
| S113A00 | Read | Opn spinal fracture with posterior thorac cord lesion, T7-12 |
| S114500 | Read | Closed spinal fracture with cauda equina lesion |
| S312500 | Read | Closed fracture distal femur, lateral condyle |
| S312300 | Read | Closed fracture distal femur, supracondylar |
| S312000 | Read | Closed fracture of distal femur, unspecified |
| S312100 | Read | Closed fracture of femoral condyle, unspecified |
| S312.11 | Read | Closed fracture of femur, distal end |
| S312200 | Read | Closed fracture of femur, lower epiphysis |
| S310.00 | Read | Closed fracture of femur, shaft or unspecified part |
| S310000 | Read | Closed fracture of femur, unspecified part |
| S302200 | Read | Closed fracture proximal femur, subtrochanteric |
| 7K1L500 | Read | Closed reduction of fracture of femur |
| S31z.00 | Read | Fracture of femur, NOS |
| S315.00 | Read | Fracture of lower end of femur |
| S314.00 | Read | Fracture of shaft of femur |
| S3x2.00 | Read | Multiple fractures of femur |
| S311.00 | Read | Open fracture of femur, shaft or unspecified part |
| S31..00 | Read | Other fracture of femur |
| S305.00 | Read | Subtrochanteric fracture |
| S310011 | Read | Thigh fracture NOS |
| S303200 | Read | Open fracture proximal femur, subtrochanteric |
| S310012 | Read | Upper leg fracture NOS |
| S310100 | Read | Closed fracture shaft of femur |
| S310z00 | Read | Closed fracture of shaft or unspecified part, NOS |
| S311000 | Read | Open fracture of femur, unspecified part |
| S311100 | Read | Open fracture shaft of femur |
| S311z00 | Read | Open fracture of femur, shaft or unspecified part, NOS |
| S312.00 | Read | Closed fracture distal femur |
| S312400 | Read | Closed fracture distal femur, medial condyle |
| S312600 | Read | Closed fracture distal femur, bicondylar (T-Y fracture) |
| S312x00 | Read | Closed fracture distal femur, comminuted/intra-articular |
| S312z00 | Read | Closed fracture of distal femur not otherwise specified |
| S313.00 | Read | Open fracture distal femur |
| S313.11 | Read | Open fracture of femur, distal end |
| S313000 | Read | Open fracture distal femur, unspecified |
| S313100 | Read | Open fracture of femoral condyle, unspecified |
| S313200 | Read | Open fracture of femur, lower epiphysis |
| S313300 | Read | Open fracture distal femur, supracondylar |
| S313400 | Read | Open fracture distal femur, medial condyle |
| S313500 | Read | Open fracture distal femur, lateral condyle |
| S313x00 | Read | Open fracture distal femur, comminuted/intra-articular |
| S313z00 | Read | Open fracture of distal femur not otherwise specified |
| SC3D400 | Read | Sequelae of fracture of femur |
| S1...00 | Read | Fracture of neck and trunk |
| NyuB000 | Read | [X]Other osteoporosis with pathological fracture |
| NyuB800 | Read | [X]Unspecified osteoporosis with pathological fracture |
| S3z0.00 | Read | Closed fracture of bones, unspecified |
| N331500 | Read | Drug-induced osteoporosis with pathological fracture |
| S3z..11 | Read | Fracture NOS |
| N331700 | Read | Fracture of bone in neoplastic disease |
| S3zz.00 | Read | Fracture of bones NOS |
| S3z..00 | Read | Fracture of unspecified bones |
| TC7..00 | Read | Fracture, cause unspecified |
| N331N00 | Read | Fragility fracture |
| N331M00 | Read | Fragility fracture due to unspecified osteoporosis |
| S3z0000 | Read | Greenstick fracture |
| N331600 | Read | Idiopathic osteoporosis with pathological fracture |
| 7K1L100 | Read | Manipulation of fracture of bone NEC |
| N331N11 | Read | Minimal trauma fracture |
| N331M11 | Read | Minimal trauma fracture due to unspecified osteoporosis |
| 7K1L.00 | Read | Other closed reduction of fracture of bone |
| N331.00 | Read | Pathological fracture |
| N331B00 | Read | Postmenopausal osteoporosis with pathological fracture |
| 7K1D100 | Read | Prim open reduct fract long bone & fixation rigid |
| 7K1D400 | Read | Prim open reduction fragment of bone & fixation using |
| 7K1LV00 | Read | Primary closed reduction of fracture alone |
| 7K1D.00 | Read | Primary open reduction fracture bone & intramedull fixation |
| 7K1JH00 | Read | Primary wire fixation of fracture |
| 7K1D800 | Read | Prmy open reduction #+locked reamed intramedullary nail fxtn |
| 7K1E000 | Read | Prmy open reduction of #+internal fixation with plate NEC |
| 7K1E800 | Read | Prmy open reduction of #+internal fixation with screw(s) |
| 7K1D511 | Read | K wiring of fracture |
| 7K1Dy00 | Read | Prim open reduction fracture bone & intramedullary fixatn OS |
| 7K1Dz00 | Read | Prim open reduction fracture bone & intramedull fixation NOS |
| 7K1Ez00 | Read | Prim open reduction fracture bone & extramedull fixation NOS |
| 7K1F.00 | Read | Primary open reduction of intraarticular fracture of bone |
| 7K1F300 | Read | Primary intraarticular fixation intraartic fracture bone NEC |
| 7K1F400 | Read | Prim extraarticular reduction intraartic fracture bone NEC |
| 7K1Fy00 | Read | Primary open reduction of intraarticular fracture bone OS |
| 7K1Fz00 | Read | Primary open reduction of intraarticular fracture bone NOS |
| 7K1G.00 | Read | Other primary open reduction of fracture of bone |
| 7K1G000 | Read | Prmy open reduction of fracture and skeletal traction |
| 7K1G100 | Read | Prmy open reduction of fracture and external fixation |
| 7K1G300 | Read | Primary open reduction of fracture alone |
| 7K1G400 | Read | Primary open reduction of fracture and cast immobilisation |
| 7K1G500 | Read | Primary open reduction of fracture and functional bracing |
| 7K1G600 | Read | Primary open reduction of fracture and skin traction |
| 7K1Gy11 | Read | Primary open reduction of bone fracture & external fixation |
| 7K1Gz00 | Read | Other primary open reduction of fracture of bone NOS |
| 7K1H.00 | Read | Secondary open reduction of fracture of bone |
| 7K1H.11 | Read | Revision to open reduction of fracture of bone |
| 7K1H200 | Read | Secondary open reduction of intraarticular fracture of bone |
| 7K1H400 | Read | Secondary open reduct fracture bone & external fixation HFQ |
| 7K1H900 | Read | Revision to open reduction of fracture alone |
| 7K1HD00 | Read | Revision to open reduction of fracture and skeletal traction |
| 7K1HE00 | Read | Revision to open reduction of fracture and external fixation |
| 7K1Hy00 | Read | Other specified secondary open reduction of fracture of bone |
| 7K1Hz00 | Read | Secondary open reduction of fracture of bone NOS |
| 7K1J.00 | Read | Closed (or no) reduction of fracture and internal fixation |
| 7K1J300 | Read | Closed reduction fracture small bone & fixation using screw |
| 7K1JJ00 | Read | Revision to wire fixation of fracture |
| 7K1JK00 | Read | Primary closed reduction of fracture and wire fixation |
| 7K1JL00 | Read | Revision to closed reduction of fracture and wire fixation |
| 7K1Jy00 | Read | Closed reduction of bone fracture and internal fixation OS |
| 7K1Jz00 | Read | Closed reduction of bone fracture and internal fixation NOS |
| 7K1K.00 | Read | Closed (or no) reduction of fracture and external fixation |
| 7K1K000 | Read | Closed reduction fracture bone and fixation to skeleton HFQ |
| 7K1K200 | Read | Remanipulation of fracture of bone and external fixation HFQ |
| 7K1K700 | Read | Primary functional bracing of fracture |
| 7K1K800 | Read | Primary external fixation of fracture |
| 7K1K900 | Read | Other primary external immobilisation of fracture |
| 7K1KA00 | Read | Revision to functional bracing of fracture |
| 7K1KB00 | Read | Revision to external fixation of fracture |
| 7K1KC00 | Read | Other revision to external immobilisation of fracture |
| 7K1KE00 | Read | Primary closed reduction of fracture and external fixation |
| 7K1Ky00 | Read | Closed reduction of bone fracture and external fixation OS |
| 7K1Kz00 | Read | Closed reduction of bone fracture and external fixation NOS |
| 7K1L011 | Read | Manipulation of fracture and skeletal traction NEC |
| 7K1L211 | Read | Remanipulation of fracture and skeletal traction NEC |
| 7K1L300 | Read | Remanipulation of fracture of bone NEC |
| 7K1LT00 | Read | Primary closed reduction of fracture and cast immobilisation |
| 7K1LW00 | Read | Primary closed reduction of fracture and skin traction |
| 7K1LX00 | Read | Revision to closed reduction of fracture alone |
| 7K1LZ00 | Read | Primary skin traction of fracture |
| 7K1La00 | Read | Revision to skin traction of fracture |
| 7K1Lb00 | Read | Primary cast immobilisation of fracture |
| 7K1Lc00 | Read | Revision to cast immobilisation of fracture |
| 7K1Ld00 | Read | Primary arthroscopic reduction of fracture |
| 7K1Le00 | Read | Primary arthroscopic reduction and fixation of fracture |
| 7K1Lf00 | Read | Revision to arthroscopic reduction of fracture |
| 7K1Lg00 | Read | Revision to arthroscopic reduction and fixation of fracture |
| 7K1Ly00 | Read | Other specified other closed reduction of fracture of bone |
| 7K1Lz00 | Read | Other closed reduction of fracture of bone NOS |
| 7K1N900 | Read | Primary skeletal traction of fracture |
| 7K1T100 | Read | Debridement of open fracture |
| 7K1Y.00 | Read | Second closed reduction fracture bone and internal fixation |
| 7K1Y100 | Read | Remanip fracture long bone and rigid internal fixation NEC |
| 7K1Yy00 | Read | OS second closed reduct fracture bone and internal fixation |
| 7K6F200 | Read | Primary open reduction of fracture dislocation of joint NEC |
| 7K6FE00 | Read | Primary open reduction of fracture dislocation alone |
| 7K6GN00 | Read | Closed reduction fracture disloc joint & internal fixation |
| 7K6GX00 | Read | Primary closed reduction of fracture dislocation alone |
| 7K6H200 | Read | Secondary open reduction fracture dislocation of joint NEC |
| 7K6H400 | Read | Revision to closed reduction of fracture dislocation alone |
| 7K6H411 | Read | Remanipulation of fracture dislocation alone |
| 7K6H700 | Read | Secondary open reduction fracture disloc joint & fixation |
| 7K6HX00 | Read | Revision to open reduction fracture dislocation alone |
| 7K6Hh00 | Read | Sec open red fracture dislocat joint and intern fixation NEC |
| 82...11 | Read | Closed reduction of fracture |
| N1y2.00 | Read | Pars interarticularis stress fracture |
| N331.13 | Read | Sponanteous fracture |
| N331200 | Read | Postoophorectomy osteoporosis with pathological fracture |
| N331300 | Read | Osteoporosis of disuse with pathological fracture |
| N331400 | Read | Postsurgical malabsorption osteoporosis with path fracture |
| N331y00 | Read | Other specified pathological fracture |
| N331z00 | Read | Pathological fracture NOS |
| N338.00 | Read | Malunion and nonunion of fracture |
| N338000 | Read | Malunion of fracture |
| N338100 | Read | Pseudoarthrosis - fracture nonunion |
| N338111 | Read | Nonunion of fracture |
| N338200 | Read | Hypertrophic non-union of fracture |
| N338300 | Read | Atrophic non-union of fracture |
| N338400 | Read | Angular mal-union of fracture |
| N338500 | Read | Rotational mal-union of fracture |
| N338600 | Read | Delayed union of fracture |
| S00..11 | Read | Frontal bone fracture |
| S00..12 | Read | Parietal bone fracture |
| S140.00 | Read | Closed fracture of ill-defined bone of trunk |
| S3z1.00 | Read | Open fracture of bones, unspecified |
| S3z2.00 | Read | Stress fracture |
| S4...13 | Read | Fracture dislocations and fracture subluxations |
| S4J..00 | Read | Other fracture-dislocation or subluxation |
| S4J0.00 | Read | Other closed fracture-dislocation |
| S4J1.00 | Read | Other open fracture-dislocation |
| S4J2.00 | Read | Other closed fracture-subluxation |
| S4J3.00 | Read | Other open fracture-subluxation |
| SC0z.11 | Read | Delayed union of fracture |
| Zw02400 | Read | [Q] Stress fracture |
| Zw02D00 | Read | [Q] Open fracture grade 1 |
| Zw02E00 | Read | [Q] Open fracture grade 2 |
| Syu6500 | Read | [X]Fracture of other & unspecified parts of wrist and hand |
| S234A00 | Read | Closd dorsal Barton's fracture |
| S234F00 | Read | Closed Barton's fracture |
| S234100 | Read | Closed Colles' fracture |
| S234A12 | Read | Closed dorsal Barton fracture-subluxation |
| S234A11 | Read | Closed dorsal Barton's fracture-dislocation |
| S240700 | Read | Closed fracture capitate |
| S250600 | Read | Closed fracture finger metacarpal |
| S250200 | Read | Closed fracture finger metacarpal base |
| S250.00 | Read | Closed fracture of metacarpal bone(s) |
| S260.00 | Read | Closed fracture of one or more phalanges of hand |
| S240100 | Read | Closed fracture of the scaphoid |
| S234B00 | Read | Closed fracture radial styloid |
| S240500 | Read | Closed fracture trapezium |
| S4C2.00 | Read | Closed fracture-subluxation of the wrist |
| S4C2100 | Read | Closed fracture-subluxation radiocarpal joint |
| 7K1LH00 | Read | Closed reduction of fracture of finger |
| S234700 | Read | Closed Smith's fracture |
| S234912 | Read | Closed volar Barton fracture-subluxation |
| S234900 | Read | Closed volar Barton's fracture |
| S234911 | Read | Closed volar Barton's fracture-dislocation |
| S26..11 | Read | Finger fracture |
| S242.00 | Read | Fracture at wrist and hand level |
| S2B..00 | Read | Fracture of bone of hand |
| S24..00 | Read | Fracture of carpal bone |
| S242100 | Read | Fracture of first metacarpal bone |
| S25..00 | Read | Fracture of metacarpal bone |
| S263.00 | Read | Fracture of other finger |
| S242200 | Read | Fracture of other metacarpal bone |
| S242000 | Read | Fracture of scaphoid |
| S262.00 | Read | Fracture of thumb |
| S4C..00 | Read | Fracture-dislocation or subluxation of wrist |
| S4D..00 | Read | Fracture-dislocation/subluxation finger/thumb |
| S25..11 | Read | Hand fracture - metacarpal bone |
| S242300 | Read | Multiple fractures of metacarpal bones |
| S235100 | Read | Open Colles' fracture |
| S261000 | Read | Open fracture of phalanx or phalanges, unspecified |
| S235B00 | Read | Open fracture radial styloid |
| S234.11 | Read | Wrist fracture - closed |
| 7K1LJ00 | Read | Closed reduction of fracture of thumb |
| 7K1LK00 | Read | Closed reduction of fracture of metacarpus |
| 7K1LM00 | Read | Closed reduction of fracture of wrist |
| S234111 | Read | Smith's fracture - closed |
| S235.11 | Read | Wrist fracture - open |
| S235111 | Read | Smith's fracture - open |
| S235700 | Read | Open Smith's fracture |
| S235900 | Read | Open volar Barton's fracture |
| S235A00 | Read | Open dorsal Barton's fracture |
| S235F00 | Read | Open Barton's fracture |
| S24..11 | Read | Hand fracture - carpal bone |
| S240.00 | Read | Closed fracture of carpal bone |
| S240000 | Read | Closed fracture of carpal bone, unspecified |
| S240200 | Read | Closed fracture lunate |
| S240300 | Read | Closed fracture triquetral |
| S240400 | Read | Closed fracture pisiform |
| S240600 | Read | Closed fracture trapezoid |
| S240800 | Read | Closed fracture hamate |
| S240900 | Read | Closed fracture hamate, hook |
| S240A00 | Read | Closed fracture scaphoid, proximal pole |
| S240B00 | Read | Closed fracture scaphoid, waist, transverse |
| S240C00 | Read | Closed fracture scaphoid, waist, oblique |
| S240D00 | Read | Closed fracture scaphoid, waist, comminuted |
| S240E00 | Read | Closed fracture scaphoid, tuberosity |
| S240F00 | Read | Closed fracture carpal bones, multiple |
| S240y00 | Read | Closed fracture of other carpal bone |
| S240z00 | Read | Closed fracture of carpal bone NOS |
| S241.00 | Read | Open fracture of carpal bone |
| S241000 | Read | Open fracture of carpal bone, unspecified |
| S241100 | Read | Open fracture of the scaphoid |
| S241200 | Read | Open fracture lunate |
| S241300 | Read | Open fracture triquetral |
| S241400 | Read | Open fracture pisiform |
| S241500 | Read | Open fracture trapezium |
| S241600 | Read | Open fracture trapezoid |
| S241700 | Read | Open fracture capitate |
| S241800 | Read | Open fracture hamate |
| S241900 | Read | Open fracture hamate, hook |
| S241A00 | Read | Open fracture scaphoid, proximal pole |
| S241B00 | Read | Open fracture scaphoid, waist, transverse |
| S241C00 | Read | Open fracture scaphoid, waist, oblique |
| S241D00 | Read | Open fracture scaphoid, waist, comminuted |
| S241E00 | Read | Open fracture scaphoid, tuberosity |
| S241z00 | Read | Open fracture of carpal bone NOS |
| S250000 | Read | Closed fracture of metacarpal bone (s), site unspecified |
| S250300 | Read | Closed fracture finger metacarpal shaft |
| S250400 | Read | Closed fracture finger metacarpal neck |
| S250500 | Read | Closed fracture finger metacarpal head |
| S250700 | Read | Closed fracture finger metacarpal, multiple |
| S250800 | Read | Closed fracture of thumb metacarpal |
| S250A00 | Read | Closed fracture thumb metacarpal shaft |
| S250B00 | Read | Closed fracture thumb metacarpal neck |
| S250C00 | Read | Closed fracture thumb metacarpal head |
| S250x00 | Read | Closed fractures of multiple sites of unspecified metacarpus |
| S250z00 | Read | Closed fracture of metacarpal bone(s) NOS |
| S251.00 | Read | Open fracture of metacarpal bone(s) |
| S251000 | Read | Open fracture of metacarpal bone(s), site unspecified |
| S251200 | Read | Open fracture finger metacarpal base |
| S251300 | Read | Open fracture finger metacarpal shaft |
| S251400 | Read | Open fracture finger metacarpal neck |
| S251500 | Read | Open fracture finger metacarpal head |
| S251600 | Read | Open fracture finger metacarpal |
| S251700 | Read | Open fracture finger metacarpal, multiple |
| S251800 | Read | Open fracture of thumb metacarpal |
| S251A00 | Read | Open fracture thumb metacarpal shaft |
| S251C00 | Read | Open fracture thumb metacarpal head |
| S251x00 | Read | Open fractures of multiple sites of unspecified metacarpus |
| S251z00 | Read | Open fracture of metacarpal bone(s) NOS |
| S252.00 | Read | Closed fracture sesamoid bone of hand |
| S253.00 | Read | Open fracture sesamoid bone of hand |
| S26..12 | Read | Thumb fracture excluding base |
| S260000 | Read | Closed fracture of phalanx or phalanges, unspecified |
| S260300 | Read | Closed fracture thumb proximal phalanx |
| S260400 | Read | Closed fracture thumb proximal phalanx, base |
| S260500 | Read | Closed fracture thumb proximal phalanx, shaft |
| S260600 | Read | Closed fracture thumb proximal phalanx, neck |
| S260700 | Read | Closed fracture thumb proximal phalanx, head |
| S260800 | Read | Closed fracture thumb distal phalanx |
| S260900 | Read | Closed fracture thumb distal phalanx, base |
| S260A00 | Read | Closed fracture thumb distal phalanx, shaft |
| S260B00 | Read | Closed fracture thumb distal phalanx, tuft |
| S260C00 | Read | Closed fracture thumb distal phalanx, mallet |
| S260D00 | Read | Closed fracture finger proximal phalanx |
| S260E00 | Read | Closed fracture finger proximal phalanx, base |
| S260F00 | Read | Closed fracture finger proximal phalanx, shaft |
| S260G00 | Read | Closed fracture finger proximal phalanx, neck |
| S260H00 | Read | Closed fracture finger proximal phalanx, head |
| S260J00 | Read | Closed fracture finger proximal phalanx, multiple |
| S260K00 | Read | Closed fracture finger middle phalanx |
| S260L00 | Read | Closed fracture finger middle phalanx, base |
| S260M00 | Read | Closed fracture finger middle phalanx, shaft |
| S260N00 | Read | Closed fracture finger middle phalanx, neck |
| S260P00 | Read | Closed fracture finger middle phalanx, head |
| S260Q00 | Read | Closed fracture finger middle phalanx, multiple |
| S260R00 | Read | Closed fracture finger distal phalanx |
| S260S00 | Read | Closed fracture finger distal phalanx, base |
| S260T00 | Read | Closed fracture finger distal phalanx, shaft |
| S260U00 | Read | Closed fracture finger distal phalanx, tuft |
| S260V00 | Read | Closed fracture finger distal phalanx, mallet |
| S260W00 | Read | Closed fracture finger distal phalanx, multiple |
| S260x00 | Read | Closed fractures of phalanx or phalanges, multiple sites |
| S260z00 | Read | Closed fracture of one or more phalanges of hand NOS |
| S261.00 | Read | Open fracture of one or more phalanges of hand |
| S261300 | Read | Open fracture thumb proximal phalanx |
| S261400 | Read | Open fracture thumb proximal phalanx, base |
| S261500 | Read | Open fracture thumb proximal phalanx, shaft |
| S261600 | Read | Open fracture thumb proximal phalanx, neck |
| S261700 | Read | Open fracture thumb proximal phalanx, head |
| S261800 | Read | Open fracture thumb distal phalanx |
| S261900 | Read | Open fracture thumb distal phalanx, base |
| S261A00 | Read | Open fracture thumb distal phalanx, shaft |
| S261B00 | Read | Open fracture thumb distal phalanx, tuft |
| S261C00 | Read | Open fracture thumb distal phalanx, mallet |
| S261D00 | Read | Open fracture finger proximal phalanx |
| S261E00 | Read | Open fracture finger proximal phalanx, base |
| S261F00 | Read | Open fracture finger proximal phalanx, shaft |
| S261G00 | Read | Open fracture finger proximal phalanx, neck |
| S261H00 | Read | Open fracture finger proximal phalanx, head |
| S261J00 | Read | Open fracture finger proximal phalanx, multiple |
| S261K00 | Read | Open fracture finger middle phalanx |
| S261L00 | Read | Open fracture finger middle phalanx, base |
| S261M00 | Read | Open fracture finger middle phalanx, shaft |
| S261N00 | Read | Open fracture finger middle phalanx, neck |
| S261P00 | Read | Open fracture finger middle phalanx, head |
| S261R00 | Read | Open fracture finger distal phalanx |
| S261S00 | Read | Open fracture finger distal phalanx, base |
| S261T00 | Read | Open fracture finger distal phalanx, shaft |
| S261U00 | Read | Open fracture finger distal phalanx, tuft |
| S261V00 | Read | Open fracture finger distal phalanx, mallet |
| S261W00 | Read | Open fracture finger distal phalanx, multiple |
| S261x00 | Read | Open fracture of phalanx or phalanges, multiple sites |
| S261z00 | Read | Open fracture of one or more phalanges of hand NOS |
| S264.00 | Read | Multiple fractures of fingers |
| S27..00 | Read | Multiple fractures of hand bones |
| S270.00 | Read | Closed multiple fractures of hand bones |
| S271.00 | Read | Open multiple fractures of hand bones |
| S27z.00 | Read | Multiple fractures of hand bones NOS |
| S4C0.00 | Read | Closed fracture dislocation of wrist |
| S4C0100 | Read | Closed fracture-dislocation radiocarpal joint |
| S4C0200 | Read | Closed fracture-dislocation mid carpal |
| S4C0300 | Read | Closed fracture-dislocation, carpometacarpal joint |
| S4C0400 | Read | Closed fracture-dislocation lunate (volar) |
| S4C0500 | Read | Closed fracture-dislocation peri-lunate (dorsal) |
| S4C0600 | Read | Closed fracture-dislocation peri-lunate trans-scaphoid |
| S4C1.00 | Read | Open fracture dislocation wrist |
| S4C1000 | Read | Open fracture-dislocation, distal radio-ulnar joint |
| S4C1100 | Read | Open fracture-dislocation radiocarpal joint |
| S4C1300 | Read | Open fracture-dislocation carpometacarpal joint |
| S4C1600 | Read | Open fracture-dislocation peri-lunate trans-scaphoid |
| S4C2200 | Read | Closed fracture-subluxation mid carpal |
| S4C2300 | Read | Closed fracture-subluxation, carpometacarpal joint |
| S4C2400 | Read | Closed fracture-subluxation lunate (volar) |
| S4C2600 | Read | Closed fracture-subluxation peri-lunate trans-scaphoid |
| S4C2y00 | Read | Closed fracture-subluxation other carpal |
| S4C3.00 | Read | Open fracture-subluxation of the wrist |
| S4C3000 | Read | Open fracture-subluxation, distal radio-ulnar joint |
| S4C3100 | Read | Open fracture-subluxation radiocarpal joint |
| S4C3300 | Read | Open fracture-subluxation, carpometacarpal joint |
| S4C3600 | Read | Open fracture-subluxation peri-lunate trans-scaphoid |
| S4D0.00 | Read | Closed fracture-dislocation digit |
| S4D0000 | Read | Closed fracture-dislocation digit, unspecified |
| S4D0100 | Read | Closed fracture-dislocation, metacarpophalangeal joint |
| S4D0200 | Read | Closed fracture-dislocation IPJ, unspecified |
| S4D0300 | Read | Closed fracture-dislocation, distal interphalangeal joint |
| S4D0400 | Read | Closed fracture-dislocation, proximal interphalangeal joint |
| S4D0500 | Read | Closed fracture-dislocation, interphalangeal joint thumb |
| S4D0600 | Read | Closed fracture-dislocation multiple digits |
| S4D1.00 | Read | Open fracture-dislocation digit |
| S4D1000 | Read | Open fracture-dislocation digit, unspecified |
| S4D1100 | Read | Open fracture-dislocation, metacarpophalangeal joint |
| S4D1200 | Read | Open fracture-dislocation IPJ, unspecified |
| S4D1300 | Read | Open fracture-dislocation, distal interphalangeal joint |
| S4D1400 | Read | Open fracture-dislocation, proximal interphalangeal joint |
| S4D1500 | Read | Open fracture-dislocation, interphalangeal joint thumb |
| S4D1600 | Read | Open fracture-dislocation multiple digits |
| S4D2.00 | Read | Closed fracture-subluxation digit |
| S4D2000 | Read | Closed fracture-subluxation digit, unspecified |
| S4D2100 | Read | Closed fracture-subluxation, metacarpophalangeal joint |
| S4D2200 | Read | Closed fracture-subluxation IPJ, unspecified |
| S4D2300 | Read | Closed fracture-subluxation, distal interphalangeal joint |
| S4D2400 | Read | Closed fracture-subluxation, proximal interphalangeal joint |
| S4D2500 | Read | Closed fracture-subluxation, interphalangeal joint thumb |
| S4D2600 | Read | Closed fracture-subluxation multiple digits |
| S4D3.00 | Read | Open fracture-subluxation digit |
| S4D3100 | Read | Open fracture-subluxation, metacarpophalangeal joint |
| S4D3300 | Read | Open fracture-subluxation, distal interphalangeal joint |
| S4D3400 | Read | Open fracture-subluxation, proximal interphalangeal joint |
| S4D3500 | Read | Open fracture-subluxation, interphalangeal joint thumb |
| S4D3600 | Read | Open fracture-subluxation multiple digits |
| SC3C000 | Read | Sequelae of fracture at wrist and hand level |
| T02 | ICD-10 | Fractures involving multiple body regions |
| T02.0 | ICD-10 | Fractures involving head with neck |
| T02.1 | ICD-10 | Fractures involving thorax with lower back and pelvis |
| T02.2 | ICD-10 | Fractures involving multiple regions of one upper limb |
| T02.3 | ICD-10 | Fractures involving multiple regions of one lower limb |
| T02.4 | ICD-10 | Fractures involving multiple regions of both upper limbs |
| T02.5 | ICD-10 | Fractures involving multiple regions of both lower limbs |
| T02.6 | ICD-10 | Fractures involving multiple regions of upper limb(s) with lower limb(s) |
| T02.7 | ICD-10 | Fractures involving thorax with lower back and pelvis with limb(s) |
| T02.8 | ICD-10 | Fractures involving other combinations of body regions |
| T02.9 | ICD-10 | Multiple fractures, unspecified |
| T08 | ICD-10 | Fracture of spine, level unspecified |
| T10 | ICD-10 | Fracture of upper limb, level unspecified |
| T12 | ICD-10 | Fracture of lower limb, level unspecified |
| T14.2 | ICD-10 | Fracture of unspecified body region |
| S02 | ICD-10 | Fracture of skull and facial bones |
| S02.0 | ICD-10 | Fracture of vault of skull |
| S02.1 | ICD-10 | Fracture of base of skull |
| S02.2 | ICD-10 | Fracture of nasal bones |
| S02.3 | ICD-10 | Fracture of orbital floor |
| S02.4 | ICD-10 | Fracture of malar and maxillary bones |
| S02.5 | ICD-10 | Fracture of tooth |
| S02.6 | ICD-10 | Fracture of mandible |
| S02.7 | ICD-10 | Multiple fractures involving skull and facial bones |
| S02.8 | ICD-10 | Fractures of other skull and facial bones |
| S02.9 | ICD-10 | Fracture of skull and facial bones, part unspecified |
| S12 | ICD-10 | Fracture of neck |
| S12.0 | ICD-10 | Fracture of first cervical vertebra |
| S12.1 | ICD-10 | Fracture of second cervical vertebra |
| S12.2 | ICD-10 | Fracture of other specified cervical vertebra |
| S12.7 | ICD-10 | Multiple fractures of cervical spine |
| S12.8 | ICD-10 | Fracture of other parts of neck |
| S12.9 | ICD-10 | Fracture of neck, part unspecified |
| S22 | ICD-10 | Fracture of rib(s), sternum and thoracic spine |
| S22.0 | ICD-10 | Fracture of thoracic vertebra |
| S22.1 | ICD-10 | Multiple fractures of thoracic spine |
| S22.2 | ICD-10 | Fracture of sternum |
| S22.3 | ICD-10 | Fracture of rib |
| S22.4 | ICD-10 | Multiple fractures of ribs |
| S22.5 | ICD-10 | Flail chest |
| S22.8 | ICD-10 | Fracture of other parts of bony thorax |
| S22.9 | ICD-10 | Fracture of bony thorax, part unspecified |
| S32 | ICD-10 | Fracture of lumbar spine and pelvis |
| S32.0 | ICD-10 | Fracture of lumbar vertebra |
| S32.1 | ICD-10 | Fracture of sacrum |
| S32.2 | ICD-10 | Fracture of coccyx |
| S32.3 | ICD-10 | Fracture of ilium |
| S32.4 | ICD-10 | Fracture of acetabulum |
| S32.5 | ICD-10 | Fracture of pubis |
| S32.7 | ICD-10 | Multiple fractures of lumbar spine and pelvis |
| S32.8 | ICD-10 | Fracture of other and unspecified parts of lumbar spine and pelvis |
| S42 | ICD-10 | Fracture of shoulder and upper arm |
| S42.0 | ICD-10 | Fracture of clavicle |
| S42.1 | ICD-10 | Fracture of scapula |
| S42.2 | ICD-10 | Fracture of upper end of humerus |
| S42.3 | ICD-10 | Fracture of shaft of humerus |
| S42.4 | ICD-10 | Fracture of lower end of humerus |
| S42.7 | ICD-10 | Multiple fractures of clavicle, scapula and humerus |
| S42.8 | ICD-10 | Fracture of other parts of shoulder and upper arm |
| S42.9 | ICD-10 | Fracture of shoulder girdle, part unspecified |
| S52 | ICD-10 | Fracture of forearm |
| S52.0 | ICD-10 | Fracture of upper end of ulna |
| S52.1 | ICD-10 | Fracture of upper end of radius |
| S52.2 | ICD-10 | Fracture of shaft of ulna |
| S52.3 | ICD-10 | Fracture of shaft of radius |
| S52.4 | ICD-10 | Fracture of shafts of both ulna and radius |
| S52.5 | ICD-10 | Fracture of lower end of radius |
| S52.6 | ICD-10 | Fracture of lower end of both ulna and radius |
| S52.7 | ICD-10 | Multiple fractures of forearm |
| S52.8 | ICD-10 | Fracture of other parts of forearm |
| S52.9 | ICD-10 | Fracture of forearm, part unspecified |
| S62 | ICD-10 | Fracture of wrist and hand level |
| S62.0 | ICD-10 | Fracture of navicular [scaphoid] bone of hand |
| S62.1 | ICD-10 | Fracture of other carpal bone(s) |
| S62.2 | ICD-10 | Fracture of first metacarpal bone |
| S62.3 | ICD-10 | Fracture of other metacarpal bone |
| S62.4 | ICD-10 | Multiple fractures of metacarpal bones |
| S62.5 | ICD-10 | Fracture of thumb |
| S62.6 | ICD-10 | Fracture of other finger |
| S62.7 | ICD-10 | Multiple fractures of fingers |
| S62.8 | ICD-10 | Fracture of other and unspecified parts of wrist and hand |
| S72 | ICD-10 | Fracture of femur |
| S72.0 | ICD-10 | Fracture of neck of femur |
| S72.1 | ICD-10 | Pertrochanteric fracture |
| S72.2 | ICD-10 | Subtrochanteric fracture |
| S72.3 | ICD-10 | Fracture of shaft of femur |
| S72.4 | ICD-10 | Fracture of lower end of femur |
| S72.7 | ICD-10 | Multiple fractures of femur |
| S72.8 | ICD-10 | Fractures of other parts of femur |
| S72.9 | ICD-10 | Fracture of femur, part unspecified |
| S82 | ICD-10 | Fracture of lower leg, including ankle |
| S82.0 | ICD-10 | Fracture of patella |
| S82.1 | ICD-10 | Fracture of upper end of tibia |
| S82.2 | ICD-10 | Fracture of shaft of tibia |
| S82.3 | ICD-10 | Fracture of lower end of tibia |
| S82.4 | ICD-10 | Fracture of fibula alone |
| S82.5 | ICD-10 | Fracture of medial malleolus |
| S82.6 | ICD-10 | Fracture of lateral malleolus |
| S82.7 | ICD-10 | Multiple fractures of lower leg |
| S82.8 | ICD-10 | Fractures of other parts of lower leg |
| S82.9 | ICD-10 | Fracture of lower leg, part unspecified |
| S92 | ICD-10 | Fracture of foot, except ankle |
| S92.0 | ICD-10 | Fracture of calcaneus |
| S92.1 | ICD-10 | Fracture of talus |
| S92.2 | ICD-10 | Fracture of other tarsal bone(s) |
| S92.3 | ICD-10 | Fracture of metatarsal bone |
| S92.4 | ICD-10 | Fracture of great toe |
| S92.5 | ICD-10 | Fracture of other toe |
| S92.7 | ICD-10 | Multiple fractures of foot |
| S92.9 | ICD-10 | Fracture of foot, unspecified |
| V08 | OPCS-4 | Reduction of fracture of maxilla |
| V08.1 | OPCS-4 | Reduction of fracture of alveolus of maxilla |
| V08.2 | OPCS-4 | Open reduction of fracture of maxilla NEC |
| V08.3 | OPCS-4 | Closed reduction of fracture of maxilla NEC |
| V08.8 | OPCS-4 | Other specified |
| V08.9 | OPCS-4 | Unspecified |
| V09 | OPCS-4 | Reduction of fracture of other bone of face |
| V09.1 | OPCS-4 | Reduction of fracture of nasoethmoid complex of bones |
| V09.2 | OPCS-4 | Reduction of fracture of nasal bone NEC |
| V09.3 | OPCS-4 | Reduction of fracture of zygomatic complex of bones |
| V09.8 | OPCS-4 | Other specified |
| V09.9 | OPCS-4 | Unspecified |
| V11 | OPCS-4 | Fixation of bone of face |
| V11.1 | OPCS-4 | Intermaxillary fixation of maxilla |
| V11.2 | OPCS-4 | Internal fixation of maxilla NEC |
| V11.3 | OPCS-4 | Extraoral fixation of maxilla |
| V11.4 | OPCS-4 | Fixation of maxilla NEC |
| V11.5 | OPCS-4 | Removal of fixation from bone of face |
| V11.8 | OPCS-4 | Other specified |
| V11.9 | OPCS-4 | Unspecified |
| V15 | OPCS-4 | Reduction of fracture of mandible |
| V15.1 | OPCS-4 | Reduction of fracture of alveolus of mandible |
| V15.2 | OPCS-4 | Open reduction of fracture of mandible NEC |
| V15.3 | OPCS-4 | Closed reduction of fracture of mandible NEC |
| V15.8 | OPCS-4 | Other specified |
| V15.9 | OPCS-4 | Unspecified |
| V17 | OPCS-4 | Fixation of mandible |
| V17.1 | OPCS-4 | Intermaxillary fixation of mandible |
| V17.2 | OPCS-4 | Internal fixation of mandible NEC |
| V17.3 | OPCS-4 | Extraoral fixation of mandible |
| V17.4 | OPCS-4 | Removal of fixation from mandible |
| V17.8 | OPCS-4 | Other specified |
| V17.9 | OPCS-4 | Unspecified |
| V44 | OPCS-4 | Decompression of fracture of spine |
| V44.1 | OPCS-4 | Complex decompression of fracture of spine |
| V44.2 | OPCS-4 | Anterior decompression of fracture of spine |
| V44.3 | OPCS-4 | Posterior decompression of fracture of spine NEC |
| V44.4 | OPCS-4 | Vertebroplasty of fracture of spine |
| V44.5 | OPCS-4 | Balloon kyphoplasty of fracture of spine |
| V44.8 | OPCS-4 | Other specified |
| V44.9 | OPCS-4 | Unspecified |
| V45 | OPCS-4 | Other reduction of fracture of spine |
| V45.1 | OPCS-4 | Open reduction of fracture of spine and excision of facet of spine |
| V45.2 | OPCS-4 | Open reduction of fracture of spine NEC |
| V45.3 | OPCS-4 | Manipulative reduction of fracture of spine |
| V45.8 | OPCS-4 | Other specified |
| V45.9 | OPCS-4 | Unspecified |
| V46 | OPCS-4 | Fixation of fracture of spine |
| V46.1 | OPCS-4 | Fixation of fracture of spine using plate |
| V46.2 | OPCS-4 | Fixation of fracture of spine using Harrington rod |
| V46.3 | OPCS-4 | Fixation of fracture of spine using wire |
| V46.4 | OPCS-4 | Fixation of fracture of spine and skull traction HFQ |
| V46.5 | OPCS-4 | Removal of fixation device from spine |
| V46.8 | OPCS-4 | Other specified |
| V46.9 | OPCS-4 | Unspecified |
| W19 | OPCS-4 | Primary open reduction of fracture of bone and intramedullary fixation |
| W19.1 | OPCS-4 | Primary open reduction of fracture of neck of femur and open fixation using pin and plate |
| W19.2 | OPCS-4 | Primary open reduction of fracture of long bone and fixation using rigid nail NEC |
| W19.3 | OPCS-4 | Primary open reduction of fracture of long bone and fixation using flexible nail |
| W19.4 | OPCS-4 | Primary open reduction of fracture of small bone and fixation using screw |
| W19.5 | OPCS-4 | Primary open reduction of fragment of bone and fixation using screw |
| W19.6 | OPCS-4 | Primary open reduction of fragment of bone and fixation using wire system |
| W19.8 | OPCS-4 | Other specified |
| W19.9 | OPCS-4 | Unspecified |
| W20 | OPCS-4 | Primary open reduction of fracture of bone and extramedullary fixation |
| W20.1 | OPCS-4 | Primary open reduction of fracture of long bone and extramedullary fixation using plate NEC |
| W20.2 | OPCS-4 | Primary open reduction of fracture of long bone and extramedullary fixation using cerclage |
| W20.3 | OPCS-4 | Primary open reduction of fracture of long bone and extramedullary fixation using suture |
| W20.4 | OPCS-4 | Primary open reduction of fracture of long bone and complex extramedullary fixation NEC |
| W20.5 | OPCS-4 | Primary open reduction of fracture of ankle and extramedullary fixation NEC |
| W20.6 | OPCS-4 | Wiring of sternum |
| W20.8 | OPCS-4 | Other specified |
| W20.9 | OPCS-4 | Unspecified |
| W21 | OPCS-4 | Primary open reduction of intra-articular fracture of bone |
| W21.1 | OPCS-4 | Primary reduction of intra-articular fracture of bone using arthrotomy as approach |
| W21.2 | OPCS-4 | Primary excision of intra-articular fragment of intra-articular fracture of bone |
| W21.3 | OPCS-4 | Primary fixation of fragment of chondral cartilage of intra-articular fracture of bone |
| W21.4 | OPCS-4 | Primary intra-articular fixation of intra-articular fracture of bone NEC |
| W21.5 | OPCS-4 | Primary extra-articular reduction of intra-articular fracture of bone |
| W21.8 | OPCS-4 | Other specified |
| W21.9 | OPCS-4 | Unspecified |
| W22 | OPCS-4 | Other primary open reduction of fracture of bone |
| W22.1 | OPCS-4 | Primary open reduction of fracture of bone and skeletal traction HFQ |
| W22.2 | OPCS-4 | Primary open reduction of fracture of bone and external fixation HFQ |
| W22.8 | OPCS-4 | Other specified |
| W22.9 | OPCS-4 | Unspecified |
| W23 | OPCS-4 | Secondary open reduction of fracture of bone |
| W23.1 | OPCS-4 | Secondary open reduction of fracture of bone and intramedullary fixation HFQ |
| W23.2 | OPCS-4 | Secondary open reduction of fracture of bone and extramedullary fixation HFQ |
| W23.3 | OPCS-4 | Secondary open reduction of intra-articular fracture of bone |
| W23.4 | OPCS-4 | Secondary open reduction of fracture of bone and skeletal traction HFQ |
| W23.5 | OPCS-4 | Secondary open reduction of fracture of bone and external fixation HFQ |
| W23.6 | OPCS-4 | Secondary open reduction of fracture of bone and internal fixation HFQ |
| W23.8 | OPCS-4 | Other specified |
| W23.9 | OPCS-4 | Unspecified |
| W24 | OPCS-4 | Closed reduction of fracture of bone and internal fixation |
| W24.1 | OPCS-4 | Closed reduction of intracapsular fracture of neck of femur and fixation using nail or screw |
| W24.2 | OPCS-4 | Closed reduction of fracture of long bone and rigid internal fixation NEC |
| W24.3 | OPCS-4 | Closed reduction of fracture of long bone and flexible internal fixation HFQ |
| W24.4 | OPCS-4 | Closed reduction of fracture of small bone and fixation using screw |
| W24.5 | OPCS-4 | Closed reduction of fragment of bone and fixation using screw |
| W24.6 | OPCS-4 | Closed reduction of fracture of bone and fixation using nail or screw |
| W24.8 | OPCS-4 | Other specified |
| W24.9 | OPCS-4 | Unspecified |
| W25 | OPCS-4 | Closed reduction of fracture of bone and external fixation |
| W25.1 | OPCS-4 | Closed reduction of fracture of bone and fixation to skeleton HFQ |
| W25.2 | OPCS-4 | Closed reduction of fracture of bone and fixation using functional bracing system |
| W25.3 | OPCS-4 | Remanipulation of fracture of bone and external fixation HFQ |
| W25.8 | OPCS-4 | Other specified |
| W25.9 | OPCS-4 | Unspecified |
| W26 | OPCS-4 | Other closed reduction of fracture of bone |
| W26.1 | OPCS-4 | Manipulation of fracture of bone and skeletal traction NEC |
| W26.2 | OPCS-4 | Manipulation of fracture of bone NEC |
| W26.3 | OPCS-4 | Remanipulation of fracture of bone and skeletal traction NEC |
| W26.4 | OPCS-4 | Remanipulation of fracture of bone NEC |
| W26.8 | OPCS-4 | Other specified |
| W26.9 | OPCS-4 | Unspecified |
| W27 | OPCS-4 | Fixation of epiphysis |
| W27.1 | OPCS-4 | Permanent cross union epiphysiodesis |
| W27.2 | OPCS-4 | Epiphysioplasty |
| W27.3 | OPCS-4 | Insertion of staple into epiphysis |
| W27.4 | OPCS-4 | Removal of staple from epiphysis |
| W27.5 | OPCS-4 | Temporary fixation of epiphysis |
| W27.8 | OPCS-4 | Other specified |
| W27.9 | OPCS-4 | Unspecified |
| W28 | OPCS-4 | Other internal fixation of bone |
| W28.1 | OPCS-4 | Application of internal fixation to bone NEC |
| W28.2 | OPCS-4 | Adjustment to internal fixation of bone NEC |
| W28.3 | OPCS-4 | Removal of internal fixation from bone NEC |
| W28.4 | OPCS-4 | Insertion of intramedullary fixation and cementing of bone |
| W28.8 | OPCS-4 | Other specified |
| W28.9 | OPCS-4 | Unspecified |
| W29 | OPCS-4 | Skeletal traction of bone |
| W29.1 | OPCS-4 | Application of skeletal traction to bone NEC |
| W29.2 | OPCS-4 | Adjustment to skeletal traction of bone |
| W29.3 | OPCS-4 | Removal of skeletal traction from bone |
| W29.8 | OPCS-4 | Other specified |
| W29.9 | OPCS-4 | Unspecified |
| W30 | OPCS-4 | Other external fixation of bone |
| W30.1 | OPCS-4 | Application of external fixation to bone NEC |
| W30.2 | OPCS-4 | Adjustment to external fixation of bone NEC |
| W30.3 | OPCS-4 | Removal of external fixation from bone NEC |
| W30.4 | OPCS-4 | Application of external ring fixation to bone NEC |
| W30.8 | OPCS-4 | Other specified |
| W30.9 | OPCS-4 | Unspecified |
| W65.1 | OPCS-4 | Primary open reduction of fracture dislocation of joint and skeletal traction HFQ |
| W65.3 | OPCS-4 | Primary open reduction of fracture dislocation of joint NEC |
| W65.4 | OPCS-4 | Primary open reduction of fracture dislocation of joint and internal fixation NEC |
| W65.5 | OPCS-4 | Primary open reduction of fracture dislocation of joint and combined internal and external fixation |
| W66.1 | OPCS-4 | Primary closed reduction of fracture dislocation of joint and skeletal traction HFQ |
| W66.3 | OPCS-4 | Primary manipulative closed reduction of fracture dislocation of joint NEC |
| W66.4 | OPCS-4 | Primary closed reduction of fracture dislocation of joint and internal fixation |
| W67.1 | OPCS-4 | Secondary open reduction of fracture dislocation of joint and skeletal traction HFQ |
| W67.3 | OPCS-4 | Secondary open reduction of fracture dislocation of joint NEC |
| W67.5 | OPCS-4 | Remanipulation of fracture dislocation of joint |
| W67.7 | OPCS-4 | Secondary open reduction of fracture dislocation of joint and internal fixation NEC |
| X48 | OPCS-4 | Immobilisation using plaster cast |
| X48.1 | OPCS-4 | Application of plaster cast |
| X48.2 | OPCS-4 | Change of plaster cast |
| X48.3 | OPCS-4 | Removal of plaster cast |
| X48.8 | OPCS-4 | Other specified |
| X48.9 | OPCS-4 | Unspecified |
| X49 | OPCS-4 | Other external support of limb |
| X49.1 | OPCS-4 | Application of splint NEC |
| X49.2 | OPCS-4 | Change of splint NEC |
| X49.3 | OPCS-4 | Removal of splint NEC |
| X49.4 | OPCS-4 | Skin traction |
| X49.5 | OPCS-4 | Application of sling NEC |
| X49.6 | OPCS-4 | Application of elastic support bandage NEC |
| X49.7 | OPCS-4 | Application of gauze support bandage NEC |
| X49.8 | OPCS-4 | Other specified |
| X49.9 | OPCS-4 | Unspecified |

## eTable 2. Included opioid drugs and equianalgesic ratios

|  |  |  |
| --- | --- | --- |
| Opioid Drug, Source | Forma | Equianalgesic Ratio |
| Alfentanil,[4] | SPR | 30.00 |
| Buprenorphine,2 | TD | 110.00 |
|  | OD | 50.00 |
| Codeine,[7] |  | 0.15 |
| Dextromoramide,[3] |  | 2.00 |
| Dextropropoxyphene,[7] |  | 0.15 |
| Diamorphineb |  | 1.00 |
| Dihydrocodeine,[7] |  | 0.13 |
| Dipipanone,[5] |  | 0.50 |
| Fentanyl,[7,3,5,1] | TD | 100.00 |
|  | OD | 50.00 |
|  | SPR | 160.00 |
| Hydromorphone,[7] |  | 6.00 |
| Methadone,[2] |  | 3.00 |
| Meptazinol,[5] |  | 0.03 |
| Morphine,[7] |  | 1.00 |
| Oxycodone,[7] |  | 1.50 |
| Pentazocine,[1] |  | 0.37 |
| Pethidine,[7] |  | 0.10 |
| Tapentadol,[2] |  | 0.40 |
| Tramadol,[7] |  | 0.20 |
| Abbreviations: SPR, sprays (buccal and nasal); TD, transdermal patch; OD, orodispersible.  a form is an oral preparation unless otherwise stated.  b rarely prescribed as an oral formulation; equianalgesic ratio based on advice from a specialist pain management pharmacist. | | |

## eFigure 1. Overview of opioid prescription preparation processa

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Setting values** | **Generating variables** | **Identifying records** | **Imputing/handling values** | **Removing records** |
| **Cleaning** | Quantity and dose | Minimum and maximum quantity and daily dose |  | Missing and implausible quantities | Missing and implausible quantities in a series of stepsb | Patients with any remaining missing or implausible quantities |
| Missing and implausible doses | Missing and implausible doses in a series of stepsb | Patients with any remaining missing or implausible doses |
| **Duration** | Duration and stop date | Maximum value for duration | Duration based on quantity and dose; stop date based on start date and duration | Records with multiple durations | Replace with mean of durations if ≤30 days apart (those >30 set to missing) |  |
| Missing and implausible durations | Missing and implausible durations via a series of stepsc |  |
| **Gap and Overlaps** | Overlapping identical products |  |  | Records for identical products with the same start date | Replace duration with the sum of durations | Excess records after combining |
| Records with overlapping days | Start and stop dates, and durations for overlapping days moved to gaps and end of records | Overlapping days that extended beyond end of follow-up |
| Gaps between identical products | Permissible gap |  | Records for identical products that have a permissible gap(<15 days) | Stop date and duration extended to close the permissible gap |  |
| **OMEQ dose** | OMEQ dose/day | Equianalgesic ratio | OMEQ dose/day for each record |  |  |  |
| Total OMEQ dose/day |  | Opioid exposure status (yes/no) | Overlapping records for different products | Summed OMEQ dose/day for overlapping days | Join records for any opioid into continuous exposed periods and drop excess records |

[Figure legend on following page]

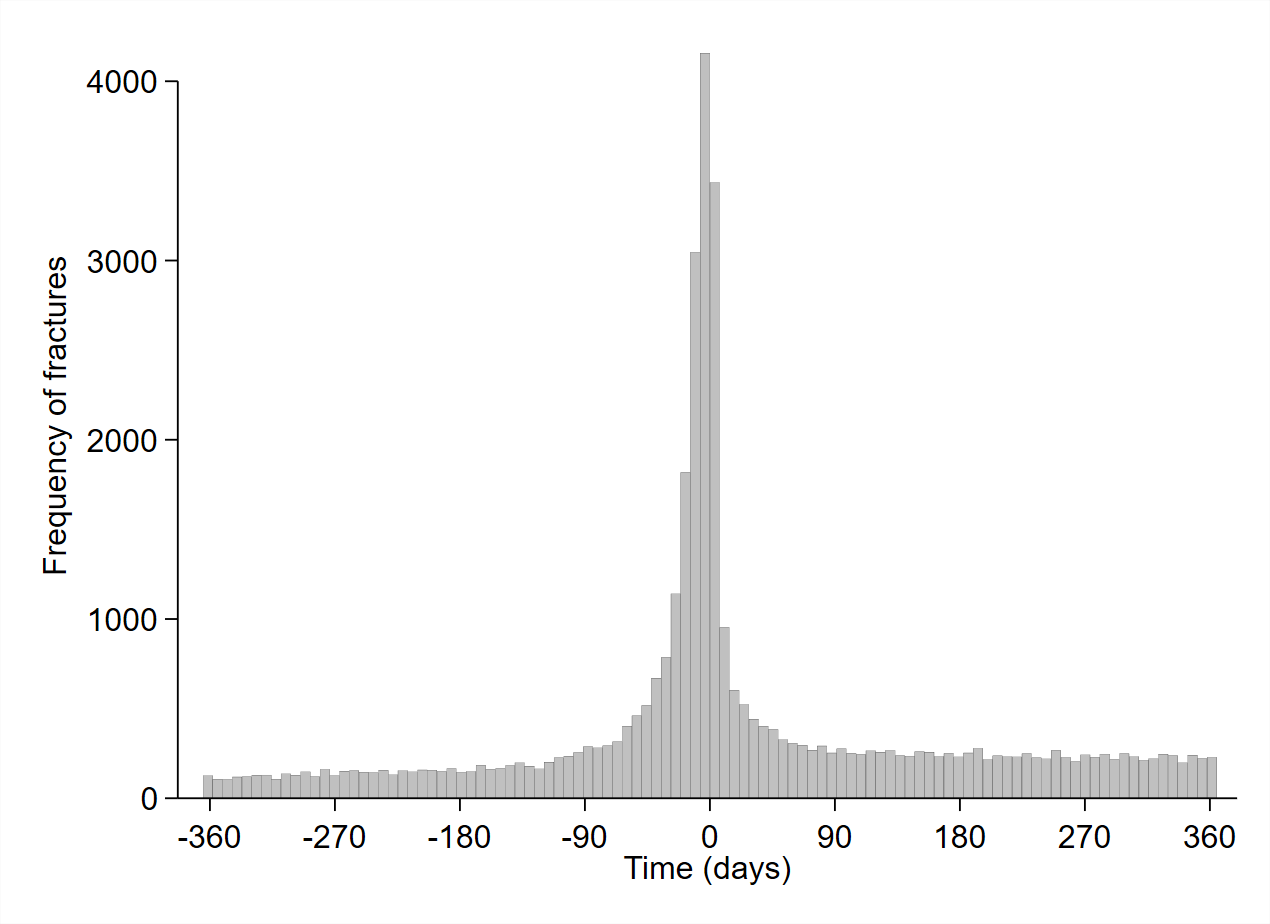
Abbreviations: OMEQ, oral morphine equivalent.

a adaptation and extension of the DrugPrep framework and respective Stata code published by Pye et al. (2018).[6]

b step 1: the value (quantity and/or daily dose) was replaced with the value recorded for a subsequent prescription for the same product, for the same patient. If there was no subsequent prescription for the product, or if the value for the subsequent prescription was missing or implausible, step 2 was followed. Step 2: the value was replaced with the value recorded for the previous prescription for the same product, for the same patient. If there was no previous prescription for the product, or if the value on the previous prescription was missing or implausible, step 3 was followed. Step 3: the value was replaced with the median value for the individual patient, taken from all plausible values recorded for their prescriptions for the same product. If there were no other prescriptions for the product, or if the values recorded for all other prescriptions were also missing or implausible, step 4 was followed. Step 4: the value was replaced with the population-median value, taken from all plausible values recorded for all prescriptions for the same product, across all patients in the study cohort. If there were no other prescriptions for the product, or if the values recorded on all other prescriptions were also missing or implausible, these records were removed, as detailed in the following section.

c step 1: the ‘new duration’ was replaced using the median duration for the individual patient, taken from all of their prescriptions for the same product. If there were no other prescriptions for the product, or if the durations recorded on all other prescriptions were also missing, step 2 was followed. Step 2: the ‘new duration’ was replaced using the population-median duration, taken from all prescriptions for the same product, across the entire study cohort.

## eFigure 2. Proximity of fracture events to opioid initiation and definition of the pre-exposure risk period



Notes: Time-point 0 indicates that the date of fracture and opioid initiation were the same. A positive value indicates that a fracture occurred after opioid initiation, and a negative value indicates that a fracture occurred before opioid initiation. The rate of fracture stabilizes >90 days before opioid initiation which indicated that 90 days was an appropriate duration for the pre-exposure risk period.

## eFigure 3. Curtailment of overlapping risk periods

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | Start | | |  |  |  |  |  |  |  |  |  |  |  |  |  | Stop | | |  |  |  |  | Start | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | First exposure | | | | | | | | | | | | | | |  | | | | | | | Subsequent exposure | | | | | | | | | | | | | | | | | | | | | | | | |
| Exposure status | | | | | | | | | Exposed | | | | | | | | | | | | | | | Unexposed | | | | | | | Exposed | | | | | | | | | | | | | | | | | | | | | | | | |
| Risk period | | | | | | | | |  | | | | | |  | | | | | | |  | |  | | | | | | |  | | | | | |  | | | | | | |  | | | | | | | | | | | |
| Duration (days) | | | | | | | | | 7 | | | | | | 7 | | | | | | | 3 | | 8 | | | | | | | 7 | | | | | | 7 | | | | | | |  | | | | | | | | | | | |
|  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  | Day 1-7 | | | | | | |  | Day 8-14 | | | | | | |  | Day 15-28 | | | | | |  | Pre-exposure | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Notes: In this example the risk period ’Day 15-28’ for the first exposed period, which is ordinarily 14 days in duration was curtailed at three days due to the stop date of the period of exposure. An eight day gap followed which was too short to incorporate a 28-day post-exposure period, baseline period and 90-day pre-exposure period, therefore the pre-exposure period took priority and was curtailed to eight days due to the restart of an opioid.

## eTable 3. Fracture risk increasing drugs (excluding opioids)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Psychoactive Drugs** | | | | |
| agomelatine | co-beneldopa | levetiracetam | pericyazine | sertraline |
| alprazolam | co-careldopa | levopromazine | perphenazine | sodium oxybate |
| amantadine | diazepam | lithium | phenelzine | sodium valproate |
| amisulpiride | dosulepin | lofepramine | phenobarbital | sulpiride |
| amitriptyline | doxepin | loprazolam | phenytoin | temazepam |
| apomorphine | duloxetine | lorazepam | pimozide | thiopental |
| aripiprazole | entacapone | lorazepam | pramipexole | tigabine |
| asenapine | escitalopram | lormetazepam | pregabalin | tolcapone |
| benperidol | eslicarbazepine | melatonin | primidone | topiramate |
| bromocriptine | ethosuximide | meprobamate | prochlorperazine | tranylcypromine |
| buspirone | fluoxetine | mianserin | procyclidine | trazodone |
| cabergoline | flupentixol | mirtazapine | promazine | trifluoperazine |
| carbamazepine | flupentixol | moclobemide | promethazine | trihexyphenidyl |
| chloral hydrate | fluphenazine | nitrazepam | quetiapine | trimipramine |
| chlordiazepoxide | flurazepam | nortriptyline | rasagiline | valproic acid |
| chlorpromazine | fluvoxamine | olanzapine | reboxetine | venlafaxine |
| citalopram | gabapentin | orphenadrine | retigabine | vigabatrin |
| clobazam | haloperidol | oxycarbazepine | risperidone | zaleplon |
| clomipramine | imipramine | paliperidone | ropinerole | zolpidem |
| clomthiazole | isocerboxazid | paroxetine | rotigotine | zonisamide |
| clonazepam | lacosamide | perampanel | rufinamide | zopiclone |
| clozapine | lamotrigine | pergolide | selegiline | zuclopentixol |
| **Cardiovascular Drugs** | | | | |
| acebutolol | cilazapril | frusene | metoprolol | riociguat |
| aliskiren | clonidine | furosemide | minoxidil | sildenafil |
| ambrisentan | co-amilofrise | hydralazine | moexipril | sodium nitroprusside |
| amiloride | co-amilozide | iloprost | moxonidine | sotalol |
| atenolol | co-flumactone | imidapril | nadolol | spironolactone |
| azilsartan | co-triamterzide | indapamide | nebivolol | tadalafil |
| bendroflumethiazide | cyclopenthiazide | indoramin | olmesartan | telmisartan |
| bisoprolol | digoxin | irbesartan | oxprenolol | terazosin |
| bosentan | doxazosin | labetalol | perindopril | timolol |
| bumetanide | enalapril | lasilactone | phenoxybenzamine | torasemide |
| candesartan | eplerenone | lisinopril | phentolamine | trandolapril |
| captopril | eprosartan | losartan | prazosin | triamterene |
| carbedilol | esmolol | macitentan | propanolol | valsartan |
| celiprolol | flecainide | methyldopa | quinapril | xipamide |
| chlortalidone | fosinopril | metolazone | ramipril |  |
| **Steroid and Glucocorticoid Drugs** | | | | |
| betamethasone | dexamethasone | methylprednisolone | prednisone |  |
| deflazacort | hydrocortisone | prednisolone |  |  |

## eFigure 4. Selection of study cohort

**Source population**

**Eligibility**

**Exposure**

* Data is not of ‘acceptable’ standard   
  (n=2 191 613)
* Patient not registered during study period   
  (n=5 970 718)
* Practice not submitting data to the CPRD during study period (n=285 536)
* <2 years of registration history (n=571 663)
* <1 day of follow-up (n=1 417 743)
* Age <18 years at study entry   
  (n=1 498 206)
* Unknown sex (n=79)

Registered in the CPRD database  
n=17 033 457

Registered in up-to-standard CPRD practice during study period  
n=8 585 590

Adults with ≥2 years CPRD registration

n=5 097 899

Linkage to additional databases   
n=543 697

* No opioid during follow-up (n=3 307 566)
* Opioid records with missing or implausible values (n=287)
* Opioid during 2-year registration history (n=832 382)
* Fracture records with missing date (n=451)
* Fracture ≤6 months before study entry   
  (n=3 877)
* No fracture recorded during follow-up   
  (n=471 747)
* No linkage to additional databases (HES and IMD) (n=413 967)

New users of opioids

n=957 664

**Study cohort:**

**Opioid users with fractures**

**n=67 622**

**Linkage**

**Outcome**

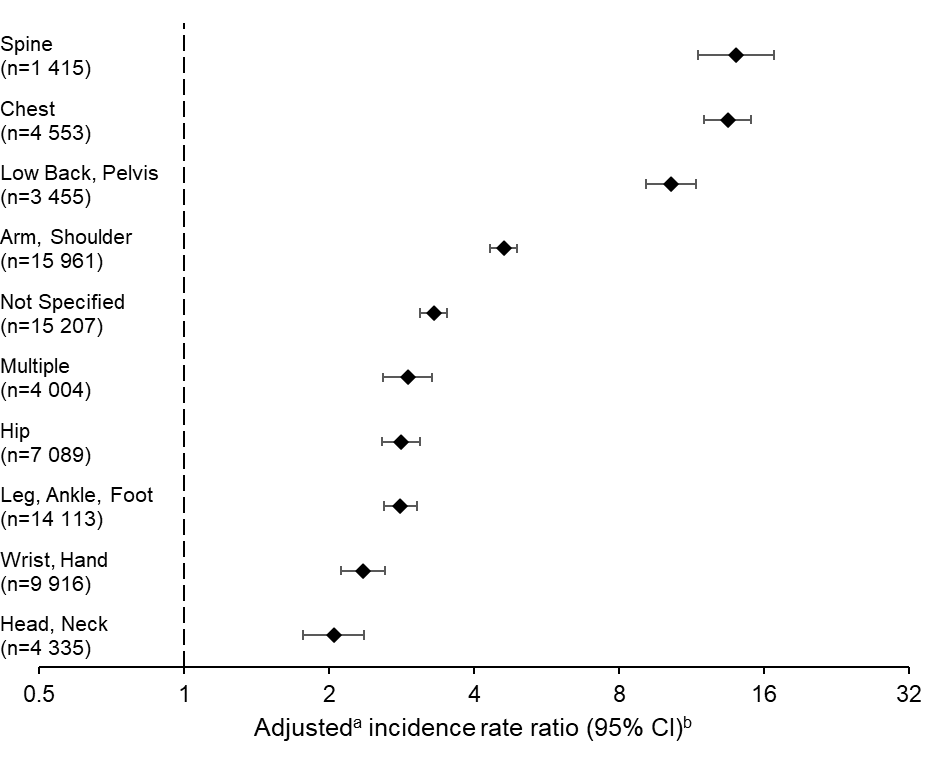
Abbreviations: CPRD, Clinical Practice Research Datalink; HES, Hospital Episode Statistics; IMD, Index of Multiple Deprivation.

Notes: Study period from June 1 2008, to May 31 2017.

## eTable 4. Sensitivity analyses

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1a | 2b | 3c | 4d | 5e | 6f | 7g |
| Risk period | aIRRh (95% CI) | aIRRh (95% CI) | aIRRh (95% CI) | aIRRh (95% CI) | aIRRh (95% CI) | aIRRh (95% CI) | aIRRh (95% CI) |
| Baseline | 1 [Reference] | 1 [Reference] | 1 [Reference] | 1 [Reference] | 1 [Reference] | 1 [Reference] | 1 [Reference] |
| Pre-exposure | 5.53 (5.44-5.62) | 5.81 (5.71-5.92) | 5.68 (5.55-5.82) | 4.88 (4.75-5.01) | 6.01 (5.89-6.13) | 12.85 (12.55-13.16) | 9.65 (9.48-9.83) |
| Post-exposure | 2.25 (2.16-2.34) | 2.27 (2.17-2.38) | 2.26 (2.13-2.40) | 2.36 (2.22-2.51) | 2.21 (2.11-2.33) | 1.85 (1.79-1.91) | 2.25 (2.17-2.33) |
| First exposure |  |  |  |  |  |  |  |
| Days 1-7 | 7.73 (7.31-8.17) | 7.74 (7.28-8.24) | 7.95 (7.37-8.57) | 6.92 (6.31-7.59) | 8.00 (7.49-8.54) | 6.10 (5.77-6.44) | 7.18 (6.80-7.59) |
| Days 8-14 | 5.08 (4.68-5.51) | 4.90 (4.46-5.37) | 4.96 (4.43-5.56) | 4.34 (3.78-4.99) | 4.89 (4.42-5.41) | 3.96 (3.65-4.29) | 4.68 (4.31-5.07) |
| Days 15-28 | 3.60 (3.17-4.08) | 3.61 (3.13-4.16) | 3.39 (2.82-4.07) | 2.71 (2.17-3.38) | 3.48 (2.97-4.07) | 2.79 (2.47-3.16) | 3.37 (2.98-3.81) |
| Days 29-365 | 1.74 (1.51-2.01) | 1.80 (1.53-2.12) | 1.67 (1.34-2.09) | 1.74 (1.42-2.14) | 1.58 (1.32-1.90) | 1.33 (1.15-1.53) | 1.64 (1.43-1.89) |
| Day 366+ | 1.34 (0.92-1.96) | 1.07 (0.66-1.74) | 1.47 (0.83-2.61) | 1.17 (0.69-1.98) | 1.26 (0.81-1.96) | 0.92 (0.63-1.34) | 1.15 (0.79-1.68) |
| Subsequent exposures |  |  |  |  |  |  |  |
| Days 1-7 | 4.80 (4.58-5.04) | 5.13 (4.86-5.42) | 4.74 (4.32-5.20) | 4.77 (4.43-5.14) | 4.77 (4.48-5.08) | 3.58 (3.42-3.74) | 4.84 (4.62-5.06) |
| Days 8-14 | 3.56 (3.34-3.79) | 3.75 (3.49-4.04) | 3.04 (2.66-3.47) | 3.49 (3.16-3.84) | 3.58 (3.29-3.88) | 2.62 (2.47-2.79) | 3.57 (3.36-3.80) |
| Days 15-28 | 3.04 (2.82-3.27) | 3.06 (2.80-3.34) | 3.04 (2.61-3.53) | 2.84 (2.53-3.19) | 2.83 (2.56-3.13) | 2.21 (2.06-2.38) | 3.04 (2.83-3.26) |
| Days 29-365 | 2.37 (2.24-2.50) | 2.31 (2.16-2.48) | 2.12 (1.86-2.38) | 2.40 (2.20-2.62) | 2.46 (2.29-2.65) | 1.73 (1.64-1.83) | 2.40 (2.27-2.53) |
| Day 366+ | 1.73 (1.51-1.99) | 1.61 (1.35-1.93) | 1.27 (0.95-1.70) | 1.73 (1.39-2.15) | 1.75 (1.47-2.08) | 1.21 (1.05-1.38) | 1.70 (1.48-1.95) |
| Abbreviations: aIRR, adjusted incidence rate ratio; CI, confidence interval.  a excluding patients that died ≤90 days after first fracture.  b outcome defined as first fractures only.  c excluding patients that had dose or duration data imputed i.e., complete-case analysis.  d excluding patients with fractures identified in the CPRD database.  e excluding patients with cancer recorded (ever) in the CPRD and HES databases.  f 7-day duration for pre-exposure risk period.  g 28-day duration for pre-exposure risk period.  h adjusted for 1-year increments in age, 3-monthly intervals for season.  Notes: aIRRs for the pre-exposure risk period are based on the fracture rate in the 90-day period prior to, and including the first day of opioid exposure, compared to the baseline rate of fracture. Pre-exposure aIRRs are likely influenced by opioid prescribing in response to fracture, resulting in greater aIRRs when compared to the baseline risk period. | | | | | | | |

## eFigure 5. Risk of fracture when exposed to opioids by anatomical site



a adjusted for 3-year increments in age and 3-monthly intervals for season.

b values plotted on logarithmic scale.

## eFigure 6. Comparison of aIRRs in primary analysis and after excluding fractures to spine, chest, low back and pelvis



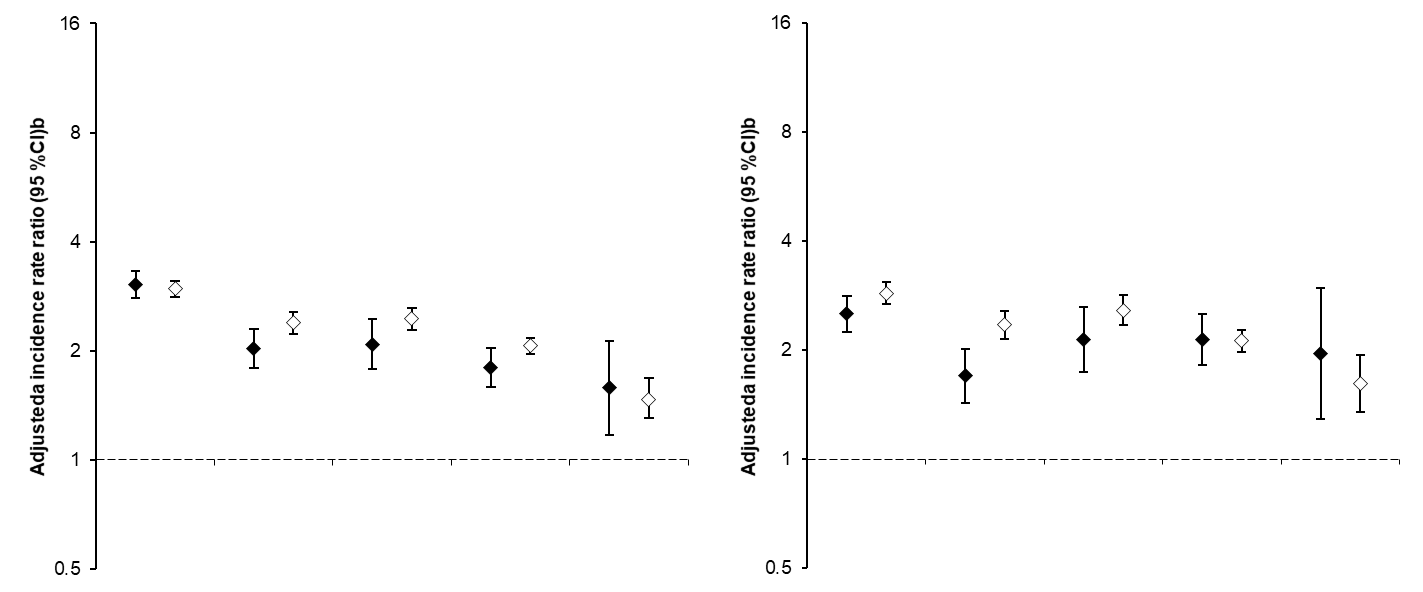
(a) Includes all fracture sites (b) Excludes fractures to spine, chest, low back and pelvis

Notes: black diamonds refer to aIRRs for the first exposure; hollow diamonds refer to aIRRs for subsequent exposure periods.

a adjusted for 1-year increments in age and 3-monthly intervals for season.

b values plotted on logarithmic scale.

## eFigure 7. Risk of falls when exposed to opioids



Day 1-7 Day 8-14 Day 15-28 Day 29-365 Day 366+

Day 1-7 Day 8-14 Day 15-28 Day 29-365 Day 366+

(a) Includes individuals who also sustained fractures (n=58 774) (b) Excludes individuals who sustained fractures (n=38 756)

Notes: black diamonds refer to aIRRs for the first exposure; hollow diamonds refer to aIRRs for subsequent exposure periods.

a adjusted for 1-year increments in age and 3-monthly intervals for season.

b values plotted on logarithmic scale.

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