**Supplementary Material**

**Table S1: International Classification of Disease - 9 Codes Included and their Categorization**

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| --- | --- | --- | --- | --- |
| **Code** | **Description** | **Region (Low back/ neck/not specified)** | **Specific/Non-specific** | **Number of Cases in the dataset (n=2,872)** |
| 720 | Ankylosing spondylitis | Not specified | Specific | 0 |
| 720.1 | Spinal enthesopathy | Not specified | Specific | 0 |
| 720.2 | Sacroiliitis, not elsewhere classified | Low Back | Specific | 1 |
| 720.8 | Other inflammatory spondylopathies | Not specified | Specific | 0 |
| 720.9 | Unspecified inflammatory spondylopathy | Not specified | Specific | 0 |
| 721 | Cervical spondylosis without myelopathy | Cervical | Specific | 1 |
| 721.1 | Cervical spondylosis with myelopathy | Cervical | Specific | 0 |
| 721.2 | Thoracic spondylosis without myelopathy | Low Back | Specific | 1 |
| 721.3 | Lumbosacral spondylosis without myelopathy | Low Back | Specific | 0 |
| 721.4 | Thoracic or lumbar spondylosis myelopathy | Low Back | Specific | 0 |
| 721.5 | Kissing spine | Not specified | Specific | 0 |
| 721.6 | Ankylosing vertebral hyperostosis | Not specified | Specific | 0 |
| 721.7 | Traumatic spondylopathy | Not specified | Specific | 0 |
| 721.8 | Other allied disorders of spine | Not specified | Specific | 0 |
| 721.9 | Spondylosis of unspecified site | Not specified | Specific | 0 |
| 722 | Displacement of cervical intervertebral disc without myelopathy | Cervical | Specific | 161 |
| 722.1 | Displacement of thoracic or lumbar intervertebral disc without myelopathy | Low Back | Specific | 17 |
| 722.2 | Displacement of intervertebral disc, site unspecified, without myelopathy | Not specified | Specific | 0 |
| 722.3 | Schmorl's nodes | Not specified | Specific | 0 |
| 722.4 | Degeneration of cervical intervertebral disc | Cervical | Specific | 3 |
| 722.5 | Degeneration of thoracic or lumbar intervertebral disc | Low Back | Specific | 2 |
| 722.6 | Degeneration of intervertebral disc, site unspecified | Not specified | Specific | 0 |
| 722.7 | Intervertebral disc disorder with myelopathy | Not specified | Specific | 2 |
| 722.8 | Post laminectomy syndrome | Not specified | Specific | 0 |
| 722.9 | Other and unspecified disc disorder | Not specified | Specific | 0 |
| 723 | Spinal stenosis of cervical region | Cervical | Specific | 12 |
| 723.1 | Cervicalgia | Cervical | Non specific | 110 |
| 723.2 | Cervicocranial syndrome | Cervical | Non specific | 0 |
| 723.3 | Cervicobrachial syndrome (diffuse) | Cervical | Non specific | 0 |
| 723.4 | Brachial neuritis or radiculitis NOS | Cervical | Specific | 5 |
| 723.5 | Torticollis, unspecified | Cervical | Specific | 0 |
| 723.6 | Panniculitis specified as affecting neck | Cervical | Specific | 0 |
| 723.7 | Ossification of posterior longitudinal ligament in cervical region | Cervical | Specific | 0 |
| 723.8 | Other syndromes affecting cervical region | Cervical | Specific | 0 |
| 723.9 | Unspecified musculoskeletal disorders and symptoms referable to neck | Cervical | Non specific | 0 |
| 724 | Spinal stenosis, other than cervical | Low Back | Specific | 221 |
| 724.1 | Pain in thoracic spine | Low Back | Non specific | 79 |
| 724.2 | Lumbago | Low Back | Non specific | 559 |
| 724.3 | Sciatica | Low Back | Specific | 18 |
| 724.4 | Thoracic or lumbosacral neuritis or radiculitis, unspecified | Low Back | Specific | 22 |
| 724.5 | Backache, unspecified (vertebrogenic) | Low Back | Non specific | 64 |
| 724.6 | Disorders of sacrum | Low Back | Non specific | 8 |
| 724.7 | Disorders of coccyx | Low Back | Non specific | 0 |
| 724.8 | Other symptoms referable to back | Low Back | Non specific | 1 |
| 724.9 | Other unspecified back disorders | Low Back | Non specific | 1 |
| 805 | Cervical fracture, closed | Cervical | Specific | 7 |
| 805.1 | Cervical fracture, open | Cervical | Specific | 0 |
| 805.2 | Dorsal [thoracic] fracture, closed | Low Back | Specific | 4 |
| 805.3 | Dorsal [thoracic] fracture, open | Low Back | Specific | 0 |
| 805.4 | Lumbar fracture, closed | Low Back | Specific | 18 |
| 805.5 | Lumbar fracture, open | Low Back | Specific | 0 |
| 805.6 | Sacrum and coccyx fracture, closed | Low Back | Specific | 3 |
| 805.7 | Sacrum and coccyx fracture, open | Low Back | Specific | 0 |
| 805.8 | Unspecified fracture, closed | Not specified | Specific | 0 |
| 805.9 | Unspecified fracture, open | Not specified | Specific | 0 |
| 839 | Cervical vertebra dislocation closed | Cervical | Specific | 0 |
| 839.1 | Cervical vertebra dislocation open | Cervical | Specific | 0 |
| 839.2 | Thoracic and lumbar vertebrae dislocation closed | Low Back | Specific | 0 |
| 839.3 | Thoracic and lumbar vertebrae dislocation open | Low Back | Specific | 0 |
| 839.4 | Other vertebra dislocation closed | Low Back | Specific | 0 |
| 839.5 | Other vertebra dislocation open | Low Back | Specific | 0 |
| 846.0-846.9 | SI sprains and strains | Low Back | Non specific | 27 |
| 847 | Sprain of Neck | Cervical | Non specific | 1108 |
| 847.1 | Sprain of Thoracic | Low Back | Non specific | 29 |
| 847.2 | Sprain of Lumbar | Low Back | Non specific | 318 |
| 847.3 | Sprain of Sacrum | Low Back | Non specific | 0 |
| 847.4 | Sprain of Coccyx | Low Back | Non specific | 0 |
| 847.9 | Unspecified site of back | Low Back | Non specific | 70 |