Health Policy Review

Survival Strategies for Tsunami of ICD-10-CM for Interventionalists: Pursue or Perish!

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The unfunded mandate for the implementation of International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) is scheduled October 1, 2015. The development of ICD-10-CM has been a complicated process. We have endeavored to keep Interventional Pain Management doctors apprised via a variety of related topical manuscripts. The major issues relate to the lack of formal physician participation in its preparation. While the American Health Information Management Association (AHIMA) and American Hospital Association (AHA) as active partners in its preparation. Centers for Medicare and Medicaid Services (CMS) and Centers for Disease Control and Prevention (CDC) are major players; 3M and Blue Cross Blue Shield Association are also involved.

The cost of ICD-10-CM implementation is high, similar to the implementation of electronic health records (EHRs), likely consuming substantial resources. While ICD-10, utilized worldwide, includes 14,400 different codes, ICD-10-CM, specific for the United States, has expanded to 144,000 codes, which also includes procedural coding system.

It is imperative for physicians to prepare for the mandatory implementation. Conversion from ICD-9-CM to ICD-10-CM coding in interventional pain management is not a conversion of one to one that can be easily obtained from software packages. It is a both a difficult and time-consuming task with each physician, early on, expected to spend on estimation at least 10 minutes per visit on extra coding for established and new patients. For interventional pain physicians, there have been a multitude of changes, including creation of new codes and confusing conversion of existing codes.

This manuscript describes a variety of codes that are relevant to interventional pain physicians and often utilized in daily practices. It is our objective that this manuscript will provide coding assistance to interventional pain physicians.

Key words: ICD-9-CM (International Classification of Diseases, Ninth revision, Clinical Modification), ICD-10, ICD-10-CM (International Classification of Diseases, 10th Revision), Health Insurance Portability and Accountability Act (HIPAA), Health Information Technology (HIT)

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Implementation of International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) continues to provoke anxiety for all healthcare related stakeholders (1-12). In the setting of electronic health records (EHRs) requirements (8,10,13), maintenance of certification programs (14), health insurance merger mania (15), and diminishing reimbursements for physicians and increasing reimbursements for hospitals (16-18), independent practices continue to be under pressure (19-24). Despite renewing threats of spending growing faster than recent national health care expenditure projections (25), the U.S. government is poised to impose ICD-10-CM on health care providers. Please note that this is different than the International Classification of Diseases, 10th Revision (ICD-10)

system. The health information technology (IT) industry is quite levered to ICD-10-CM implementation and use. (2-4,12,26-40). Congress is attempting to look at the various deficiencies in EHRs and meaningful use (26,41) with ever-growing information blocking, lack of interoperability, and many other issues (7). Thus, physicians in the United States are already quite regulated from Health Insurance Portability and Accountability Act (HIPAA) (6); components of the Affordable Care Act (ACA), including EHRs (1,5,10,11,13) with almost 2,200 quality metrics; the physician quality reporting system with value-based payment program; and electronic prescribing. It can be difficult to relate costs to specific regulatory requirements. Published figures indicate that in total, conversion to newer EHR systems can be as much as much as $700 million for implementation at a single facility; EHRs costing $1.4 billion just at Partners Health Care of Massachusetts General Hospital and Brigham and Women's Hospital, and $700 million for Duke Health for a single facility, which is ironically more expensive than what it has cost recently to construct a 500 bed hospital at a cost of $1.1 billion (1,5,9-11).

As we have shown in previous manuscripts (2-4,25,28), ICD-10 is neither a simple regulation, nor is it ICD-10 (18). By this time, Congress and the entire world is well aware that ICD-10 includes 14,400 different codes used worldwide (29); however, ICD-10-CM, has expanded the codes to 144,000 inclusive of procedural coding system (42). The numerous arguments made by the supporters of ICD-10-CM, include that the United States lags behind other countries, the costs of implementation are very modest, and that many have already spent significant amounts with an expectation of a return on investment, including the health IT industry, illustrating a multitude of hypothetical advantages (2-5,29-35). Unfortunately, these supports consist, in part, of a powerful lobby from the health information industry with control of the electronic media, essentially blocking opposing information to a great extent. Congress has even ignored the Supreme Court ruling that unfunded mandates must not be permitted (42,43). ICD-10-CM is in fact creating a major administrative burden in the face of numerous other regulations and declining reimbursement. This manuscript describes strategies for implementation of ICD-10-CM for interventional pain management practices, by offering common coding in simple, understandable format without consuming large blocks of time (2-4).

1.0 Development of ICD-10-CM

In short, HIPAA has provided the Centers for Medicare and Medicaid Services (CMS) with a vague basis to update ICD-9, which has been interpreted by CMS as ICD-10 implementation, with a macroscopic enlargement into ICD-10-CM (33). The development of ICD-10-CM has been managed by 4 nonphysician groups, entitled cooperating parties, including the American Health Information Management Association (AHIMA) and the American Hospital Association (AHA) as active partners dominating the scene with CMS and Centers for Disease Control and Prevention (CDC). AHIMA and AHA have derived enumerable benefits for themselves and their clients with the impending implementation of ICD-10-CM. In addition, the ICD-10-CM coalition includes 3M, which made substantial profits from the development of International Classification of Diseases, 10th Revision, Procedure Coding System (ICD-10-PCS) codes, and by selling poorly designed Ambulatory Payment Classification (APC) software to Medicaid programs and others. Blue Cross Blue Shield also has been named as a coalition partner, which has its own agenda and survival of physician practices is not one of them. Similar to development and execution of the conversions from ICD-9-CM to ICD-10-CM are the product of these organizations without clinician involvement.

2.0 Pursue or Perish

It is crucial for all physicians, specifically interventional pain physicians, to avoid revenue disruptions, excessive staffing costs, breakdowns in communication, and finally, physician workload. At the least, ICD-10-CM incorporation will add to the workload of interventional pain physicians as they attempt to convert previously established patients to the new coding system, along with coding for new patients.

2.1 Conversion of ICD-9-CM to ICD10-CM Coding in Interventional Pain Management

Multiple manuscripts in peer reviewed journals and other publications, have highlighted the multiple rather bizarre aspects of these codes (2-4,30-33,36-40). The literature shows that over 500 codes are more specific in ICD-9-CM than ICD-10-CM, creating paradoxical deficiencies. Further, there are over 3,600 instances where ICD-10-CM coding can map to multiple ICD-9-CM codes. This may create significant confusion, demanding significant resources, and leading to potential denials. Over 80% of the time, interventional pain physicians will be likely forced to use more than one code to cover

the same issues, which were previously covered with one code.

To isolate appropriate coding and avoid unnecessary work load, physicians can remove the majority of useless codes, such as unspecified extremity codes, and many other codes which are not relevant to clinical practice or to research.

It has been widely stated that ICD-9-CM codes convert one to one to ICD-10-CM, current electronic medical record software will automatically do so; hence, a physician does not have to use any resources and it will not waste any time. This is unfortunately largely inaccurate.

As described earlier as an example, for each region of the spine, there are many unnecessary codes which can be eliminated. Even after elimination of irrelevant codes, the 3 disc displacement codes (722.0, 722.10, and 721.11) will be changed to 7 disc displacement codes (M50.21 – M50.23 M51.24 – M51.27) The cervical region is divided into high cervical, mid cervical, and cervicothoracic regions. The thoracic region is divided into thoracic and thoracolumbar regions, and the lumbar region is divided into lumbar and lumbosacral regions with separate codes.

In addition, there are also approximately 8 codes describing other cervical disc disorders with 5 similar codes in the thoracic and lumbar regions. These are in addition to disc degeneration codes.

While radiculopathy codes as described in the past 723.4 and 724.4 are expanded to 6 separate codes, the ICD-10-CM system. In addition, ICD-10-CM creates 4 new codes with disc disorder with radiculopathy in the cervical spine, 2 in the thoracic spine, and 2 in the lumbar spine. There is also a category for disc disorder with myelopathy with multiple codes. Further, sciatica is branched into 4 separate codes designating right and left, as well as lumbago with sciatica on the right and left sides.

A single spinal stenosis code in the cervical region is now branched to 9 codes. Thoracic spinal stenosis is now branched to another 8 codes. A single cervical spinal stenosis code 723.0, thoracic code 724.01, and 2 lumbar spinal stenosis codes, 724.02 and 724.03 identifying neurogenic claudication, have been now branched to a total of 32 codes.

In addition, there are numerous codes with multiplicities for various other disorders, including chronic regional pain syndrome (CRPS), myositis, multiple joint disorders with each now spanning from 5 to 30 codes, and arthritis.

2.2 Conversion of Lumbosacral Spine Disorders Coding

Lumbosacral spinal pain is the most common pain encountered in interventional pain management settings. The majority of the procedures performed in interventional pain management settings are related to the lumbosacral spine (44,45).

Multiple lumbosacral disorders include those related to disc abnormalities, posterior column disorders with facet joint arthropathy, spondylosis, spondylolysis, spondylolisthesis, spinal stenosis, myelopathy, and radiculopathy. Appendix 1 shows multiple code conversions, changing now from one code to multiple essential codes after exclusion of the unnecessary codes. Commonly utilized codes are listed in Table 1. Among the most frequently used codes, none convert one to one.

There is significant confusion with lumbar disc displacement without myelopathy or radiculopathy, lumbar disc disorder with radiculopathy, and lumbar disc disorder with myelopathy.

A new creation is lumbar disc disorder with radiculopathy.

Further, the new system now creates 4 codes in reference to sciatica, 2 different codes for lumbar disc disorder with radiculopathy which were nonexistent, 2 codes for lumbar spondylosis with radiculopathy, and provides an option for foraminal stenosis. The advantages, as well as disadvantages, include description of stenosis without providing any reasoning, providing pathologic basis (M48.06 lumbar and M48.07 lumbosacral), subluxation stenosis, osseous stenosis, connective tissue stenosis, intervertebral disc stenosis, and finally 2 separate codes for foraminal stenosis with either osseous and subluxation or connective tissue and disc stenosis. Even though, expansion of 2 codes into 10 new codes replacing the 2 old codes, there is no code available for lumbar spinal stenosis with neurogenic claudication.

Other disorders of the lumbar spine for epidural injections coding include lumbar spondylosis with radiculopathy M47.26 (lumbar) and M47.27 (lumbosacral), which are new codes, and lumbar spondylosis with myelopathy which is a conversion to a single new code M47.16. Lumbar spondylosis or spondylolisthesis potentially changes from one code to 4 codes (M43.06, M43.07, M43.16, M43.17) to describe lumbar and lumbosacral spondylolysis and spondylolisthesis. Congenital spondylolisthesis, lumbar epidural fibrosis, arachnoiditis, and lumbar post laminectomy syndrome all have single code. Lumbar root lesions and plexus le-

sions, lumbar Schmorl's nodes, and lumbar spinal stenosis or neural canal stenosis with or without neurogenic claudication change from 2 codes to 8 new codes with loss of specificity for neurogenic claudication.

For obvious reasons, stenosis coding could be difficult, and spondylolysis and spondylolisthesis coding could lead to multiple codes. A stenosis with a combination of osseous, connective tissue, intervertebral discs, subluxation, and foraminal stenosis may require 4 to 8 codes. Even then, it would not differentiate neurogenic claudication.

Lumbosacral facet joint pain is one of the most frequently treated conditions in an interventional pain management setting. Facet joint interventions occupy a significant proportion of overall interventional techniques. In the past, lumbosacral facet joint arthropathy was described and quoted as spondylosis without myelopathy (ICD-9-CM 721.3); spondylosis without myelopathy or radiculopathy will be appropriate wording to utilize for lumbar facet joint arthropathy. ICD-10-CM now translates to 2 codes for lumbar levels (M47.816) and for lumbosacral levels (M47.817), to describe facet joint arthropathy, which was described by a single code. Consequently, there is no other choice in the new system, other than providing 2 separate codes to describe lumbosacral facet joint arthropathy, unless L5/S1 is not involved.

Facet joint interventions performed for spondylosis or spondylolisthesis must be now described by different codes.

It is rather distressing to see that some local coverage determinations (LCDs) have converted facet joint codes into a total of 300 to 1,783 codes (11 entries in Group 1 and 300 to 1,772 entries in Group 2) and all of the Group 2 entries are irrelevant to facet joint interventions.

2.3 Conversion of Sacroiliac Joint Disorders Coding

There is one to one conversion for sacroiliitis from CPT 720.2 to M46.1 without specification of right, left, or bilateral. In contrast, disorders of the sacrum (CPT 724.6) convert to 8 codes in the new system; however, some of these codes are rarely suitable for use in interventional pain management for sacroiliac joint injections. As with the entire system of ICD-CM-10, M53.3 lacks specificity as it converts from multiple ICD-9-CM codes including 724.6 – disorders of sacrum, CPT 724.70 – unspecified disorder of coccyx, and CPT 724.79 – other disorders of coccyx, but not specifically to CPT 720.2.

2.4 Conversion of Cervical Spine Disorders Coding

Next to lumbosacral spine disorders, cervical spine disorders are the most commonly seen in interventional pain management settings. Cervical spinal interventions constitute a significant proportion of overall spinal interventional techniques (43-45).

Cervical disc degenerative disorders have numerous codes in 6 categories. These include cervical disc displacement, cervical disc disorder, cervical disc degeneration, cervical radiculopathy, cervical disc disorder with radiculopathy, and cervical disc disorder with myelopathy. All of them have multiple codes. Cervical disc disorder with 10 codes and cervical disc disorder with radiculopathy with 4 codes are new arrivals; consequently, occasionally one may not find a conversion from ICD-9-CM to ICD-10-CM.

As shown in Appendix 2, similar to coding of the lumbosacral region, coding for the cervical region is also complicated. In essence, the cervical region is more complicated than the lumbar region since the cervical region is divided into high cervical, mid cervical, and cervicothoracic regions with other unspecified and specified coding.

A patient arriving with cervical disc degeneration at high, mid, and cervico-thoracic regions and disc disorder with or without radiculopathy may be coded with one to 3 codes for disc degeneration and one to 3 codes for disc disorder with or without radiculopathy for a total of 6 codes. The code describing cervical radiculopathy (CPT 723.4) is now converted to (M54.11, M54.12 and M54.13), describing cervical radiculopathy and cervicothoracic radiculopathy is not known.

A patient presenting with cervical disc degeneration and protrusion at multiple levels with or without radiculopathy may be coded with 2 or 3 codes in the cervical disc degeneration category, 2 or 3 codes in the cervical disc displacement without radiculopathy category, and cervical disc disorder with radiculopathy category.

Cervical spondylosis with radiculopathy has a set of new codes; cervical spondylosis with myelopathy, cervical spondylolysis or spondylolisthesis branching from one code into 6 essential codes, cervical post laminectomy syndrome, cervical root lesions have a single code, and cervical epidural fibrosis with nonspecific meningitis and meningeal adhesions have codes.

Cervical spinal stenosis without myelopathy or radiculopathy also involves multiple codes specifying occipito-atlanto-axial, cervical, and cervicothoracic re-

gions, and pathology with a description of foraminal stenosis.

Thus, for a patient receiving an epidural injection who also suffers from disc displacement and cervical spinal stenosis, it may be necessary to also list either central stenosis or foraminal stenosis based on their pathology, unless stenosis is due to disc displacement.

Cervical facet joint arthropathy coding may be easier than epidural coding since cervical facet joint arthropathy or cervical spondylosis without myelopathy, practically consists of only 2 codes, either cervical or cervicothoracic (M47.812 or M4.7813). Consequently, unless C7-T1 facet joint nerve blocks or facet joint injection is carried out it will be sufficient to use M07.22 for cervical spondylosis and M47.812 for cervical facet joint arthropathy or spondylosis without myelopathy.

There are multiple codes for cervical strain, neck pain, root lesions, and occipital neuralgia; however, all of them with one to one conversions except for cervical strain.

2.5 Conversion of Thoracic Spine Disorders Coding

Thoracic spinal procedures are least used of all 3 regions (44,45); however, the coding patterns follow lumbosacral coding as shown in Appendix 3.

All thoracic levels have thoracic and thoracolumbar codes. Consequently, any disc disorder may be coded with multiple combinations. As shown in Table 3, thoracic disc displacement, thoracic disc degeneration, other thoracic disc disorders, thoracic radiculopathy, and thoracic disc disorder with myelopathy convert into multiple disc disorder codes. Further, a new category has been created which shows thoracic disc disorder with radiculopathy. Overall, there is an expansion of codes a physician can use, while at the same time creating duplicity, confusion, and a multiplicity of codes for a single disorder.

Thoracic spinal stenosis or neural canal stenosis consist of multiple codes with multiple options. Thoracic spondylolysis or spondylolisthesis also branches out to multiple codes; whereas, thoracic congenital spondylolisthesis consists of only one code. Thoracic spinal stenosis changes from a single code to multiple codes and may still be difficult because of the combination of nonspecific and specific codes. Thoracic spondylosis with radiculopathy has no code in ICD-9-CM; however, it presents with 2 codes in ICD-10-CM: M47.24 and M47.25. Similarly, thoracic spondylosis with myelopathy represented with CPT 721.41 in the past converts to 2

separate codes for possible candidates for epidural injections. Thoracic acquired spondylolysis or spondylolisthesis with previous CPT code of 738.4 converts into 4 relevant codes, whereas thoracic congenital spondylolisthesis converts to only one code. Thoracic epidural fibrosis and thoracic arachnoiditis convert into 2 nonspecific codes, which are same in the cervical and lumbar regions. Thoracic post laminectomy syndrome also has a single code.. Thoracic Schmorl's nodes convert into only one ICD-10-CM code.

For thoracic facet joint arthropathy or spondylosis without myelopathy or radiculopathy there are 2 codes branching from one ICD-9-CM code. In the majority of instances, unless a T12-L1 facet joint nerve block is performed, one code (M51.04) may suffice. However, if thoracolumbar joints are blocked it is essential to code with M51.05.

Thoracic facet joint coding was based on CPT 721.2 described as spondylosis without myelopathy. Now it is described as thoracic spondylosis without myelopathy or radiculopathy with 2 separate codes, M47.814 and M47.815. Facet joint codes may also include thoracic spondylosis or spondylolisthesis. Thoracic fractures are also listed for thoracic facet joint intervention codes.

Table 1 summarizes the most commonly used spinal codes for all 3 regions.

2.6 Conversion for Complex Regional Pain Syndrome and Neuropathy Coding

Conversion for Headache Coding

Multiple diagnosis are available for headache disorders including migraine, cluster headaches, tension headaches, and other headache syndromes. In addition, neurological disorders also include sleep disorders which have been shown in the same category. Appendix 4,5 shows relevant codes in the sections of headache and facial neuralgias, and sleep disorders.

2.8 Conversion of Arthritis Coding

Arthritis may consist of either of osteoarthritis, rheumatoid arthritis, ankylosing spondylitis, etc. However, under the new classification there are numerous codes describing these based on each region involved as well as etiology and side involved. There are also codes for bilateral, unspecified extremity, etc.

Rheumatoid arthritis is listed with 8 ICD-9-CM codes ranging from 714.0 to 714.4, whereas ICD-10-CM has 427 codes ranging from M05.00 to M12.09. In fact for rheumatoid arthritis ICD-9-CM code 714.0, converts

to 190 ICD-10-CM codes ranging from M05.40 to M06.9.

2.9 Coding for Upper Extremity Joints

Coding for upper extremity joints involves the shoulder, elbow, wrist, and multiple joints in the hand and fingers. There are numerous codes describing these settings as shown in Appendix 6.

2.10 Coding for Lower Extremity Joints

The lower extremity joint codes are also extensive, describing the hip, knee, ankle, foot, and toes. There are a multitude of codes showing various disorders, sides, nonspecific, bilateral, and other specificities as shown in Appendix 7.

2.11 Medical Codes

There are numerous medical codes describing various systems. It may be easier for physicians to identify a few commonly utilized codes, which can be obtained by searching ICD-10-CM, if needed, or a simple written diagnosis may suffice, as interventionalists rarely use these codes for billing purposes.

Table 1. *Summary of coding of commonly utilized spinal codes in interventional pain management.*

CERVICAL		THORACIC		LUMBAR	
ICD-9-CM	ICD-10-CM	ICD-9-CM	ICD-10-CM	ICD-9-CM	ICD-10-CM
Disc displacement W/O myelopathy or radiculopathy					
722.0	☐ M50.21 High cervical C2/3, C3/4	722.11	☐ M51.24 Thoracic	722.10	☐ M51.26 Lumbar
	☐ M50.22 Mid-cervical C4/5, C6/7		☐ M51.25 Thoracolumbar		☐ M51.27 Lumbosacral
	☐ M50.23 Cervicothoracic C7/T1				
Other Disc disorder					
NA	☐ M50.81 High cervical C2/3, C3/4	NA	☐ M51.84 Thoracic region	NA	M51.86 Lumbar region
	☐ M50.82 Mid-cervical C4/5, C6/7		☐ M51.85 Thoracolumbar region		☐ M51.87 Lumbosacral region
	☐ M50.83 Cervicothoracic C7/T1				
Disc degeneration					
722.4	☐ M50.31 High cervical C2/3, C3/4	722.51	☐ M51.34 Thoracic	722.52	☐ M51.36 Lumbar
	☐ M50.32 Mid-cervical C4/5, C6/7		☐ M51.35 Thoracolumbar		☐ M51.37 Lumbosacral
	☐ M50.33 Cervicothoracic C7/T1				
Radiculopathy					
723.4	☐ M54.12 Cervical	724.4	☐ M54.14 Thoracic	724.4	☐ M54.16 Lumbar
	☐ M54.13 Cervicothoracic		☐ M54.15 Thoracolumbar		☐ M54.17 Lumbosacral
Disc disorder with radiculopathy					
NA	☐ M50.11 High cervical C2/3, C3/4	NA	☐ M51.14 Thoracic	NA	☐ M51.16 Lumbar
	☐ M50.12 Mid-cervical C4/5, C6/7		☐ M51.15 Thoracolumbar		☐ M51.17 Lumbosacral
	☐ M50.13 Cervicothoracic C7/T1				
Disc disorder with myelopathy					
722.71	☐ M50.01 High cervical C2/3, C3/4	722.72	☐ M51.04 Thoracic	722.73	☐ M51.06 Lumbar
	☐ M50.02 Mid-cervical C4/5, C6/7		☐ M51.05 Thoracolumbar	344.60 344.61	☐ G83.4 Cauda equina syndrome
	☐ M50.03 Cervicothoracic C7/T1				
Facet joint arthropathy (spondylosis without myelopathy					
721.0	☐ M47.812 Cervical	721.2	☐ M47.814 Thoracic	721.3	☐ M47.816 Lumbar
	☐ M47.813 Cervicothoracic		☐ M47.815 Thoracolumbar		☐ M47.817 Lumbosacral
Spondylosis with radiculopathy					
NA	☐ M47.22 Cervical	NA	☐ M47.24 Thoracic	NA	☐ M47.26 Lumbar
	☐ M47.23 Cervicothoracic		☐ M47.25 Thoracolumbar		☐ M47.27 Lumbosacral
Spondylosis with myelopathy					
721.1	M47.12 Cervical	721.41	☐ M47.14 Thoracic	721.42	☐ M47.16 Lumbar
	☐ M47.13 Cervicothoracic		☐ M47.15 Thoracolumbar		
Spinal stenosis or Neural canal stenosis					
723.0	☐ M48.02 Cervical	724.01	☐ M48.04 Thoracic	724.02 or 724.03	☐ M48.06 Lumbar
	☐ M48.03 cervicothoracic		☐ M48.05 Thoracolumbar		☐ M48.07 Lumbosacral
	☐ M99.21 Subluxation stenosis		☐ M99.22 Subluxation stenosis		☐ M99.23 Subluxation stenosis
	☐ M99.31 Osseous stenosis		☐ M99.32 Osseous stenosis		☐ M99.33 Osseous stenosis
	☐ M99.41 Connective tissue stenosis		☐ M99.42 Connective tissue		☐ M99.43 Connective tissue stenosis
	☐ M99.51 Intervertebral disc stenosis		☐ M99.52 Intervertebral disc stenosis		☐ M99.53 Intervertebral disc stenosis
	☐ M99.61 Foraminal: Osseous and subluxation stenosis		☐ M99.62 Foraminal: Osseous and subluxation stenosis		☐ M99.63 Foraminal: Osseous and subluxation stenosis
	☐ M99.71 Foraminal: Connective tissue and disc stenosis		☐ M99.72 Foraminal: Connective tissue and disc stenosis		☐ M99.73 Foraminal: Connective tissue and disc stenosis

Table 1 (cont.). *Summary of coding of commonly utilized spinal codes in interventional pain management.*

CERVICAL		THORACIC		LUMBAR	
ICD-9	ICD-10	ICD-9	ICD-10	ICD-9	ICD-10
Spondylolysis or Spondylolisthesis					
738.4	☐ M43.02 Spondylolysis, cervical	738.4	☐ M43.04 Spondylolysis, thoracic	738.4	☐ M43.06 Spondylolysis, lumbar
	☐ M43.03 Spondylolysis, cervicothoracic		☐ M43.05 Spondylolysis, thoracolumbar		☐ M43.07 Spondylolysis, lumbosacral
	☐ M43.07 Spondylolysis, lumbosacral		☐ M43.14 Spondylolisthesis, thoracic		☐ M43.16 Spondylolisthesis, lumbar
	☐ M43.09 Spondylolysis, multiple sites in spine		☐ M43.15 Spondylolisthesis, thoracolumbar		☐ M43.17 Spondylolisthesis, lumbosacral
	☐ M43.12 Spondylolisthesis, cervical				
	☐ M43.13 Spondylolisthesis, cervicothoracic				
Congenital spondylolisthesis					
756.12	☐ Q76.2 Congenital spondylolisthesis	756.12	☐ Q76.2 Congenital spondylolisthesis	756.12	☐ Q76.2 Congenital spondylolisthesis
Epidural fibrosis/ Arachnoiditis					
349.2	☐ G96.12 Meningeal adhesions	349.2	☐ G96.12 Meningeal adhesions	349.2	☐ G96.12 Meningeal adhesions
322.9	☐ G03.9 Meningitis, unspecified	322.9	☐ G03.9 Meningitis, unspecified	322.9	☐ G03.9 Meningitis, unspecified
Post laminectomy syndrome					
722.81	☐ M96.1 Postlaminectomy syndrome	722.81	☐ M96.1 Postlaminectomy syndrome	722.81	☐ M96.1 Postlaminectomy syndrome
Strain					
847.0	☐ S13.4XXA Sprain of ligaments, initial encounter	847.1	☐ S23.3XXA Sprain of ligaments, initial encounter	847.2	☐ S33.5XXA Sprain of ligaments of lumbar spine, initial encounter
	☐ S13.4XXD Sprain of ligaments, subsequent encounter		☐ S23.3XXD Sprain of ligaments, subsequent encounter		☐ S33.5XXD Sprain of ligaments of lumbar spine, subsequent encounter
	☐ S13.8XXA Sprain of joints and ligaments, initial encounter		☐ S23.8XXA Sprain of other specified parts, initial encounter		
	☐ S13.8XXD Sprain of joints and ligaments, subsequent encounter		☐ S23.8XXD Sprain of other specified parts, subsequent encounter		
	☐ S16.1XXA Strain of muscle, fascia and tendon, initial encounter				
	☐ S16.1XXD Strain of muscle, fascia and tendon, subsequent encounter				
Other Root Disorder					
723.8	☐ M54.81 Occipital neuralgia	354.8	☐ G58.0 Thoracic intercostal neuropathy	353.1	☐ G54.1 Lumbosacral plexus disorders
		353.3	☐ G54.3 Thoracic root disorders	353.8	☐ G54.8 Other nerve root and plexus disorders
					☐ G55 Nerve root and plexus compressions in diseases classified elsewhere
				608.9	☐ R10.2 Pelvic and perineal pain
				625.9	
				789.09	
Pain					
723.1	☐ M54.2 Neck pain	733.6	☐ M94.0 Costochondral (Tietze's disease)	724.2	☐ M54.5 Low back pain
		611.71	☐ N64.4 Mastodynia	724.79	☐ M53.3 Lumbar Sacrococcygeal
		786.52	☐ R07.1 Chest pain on breath		
		786.59	☐ R07.82 Intercostal		
		724.1	☐ M54.6 Pain in thoracic spine		

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

2.12 Psychological Coding

Psychological disorders also have branched into many codes compared to ICD-9-CM or DSM-IV. Appendix 8 shows psychological codes. These are probably the easiest conversions, with majority of them converting one to one.

2.12 Drug Dependency Coding

Numerous codes have been developed describing drug abuse, dependency, and addiction as shown in Appendix 9.

These codes expand a single code to numerous codes except for a few which convert one on one. There are numerous codes describing opioid type drug dependency or drug abuse. Similarly, there are multiple codes describing barbiturates, cocaine, marijuana, drug dependency, and amphetamine drug dependency.

2.1.3 Conversion of Acute and Chronic Pain Codes

Appendix 10 shows multiple descriptions of pain both acute and chronic from ICD-9-CM to ICD-10-CM.

3.0 Practical Coding Strategies

Practical coding strategies include developing a single page devoted to commonly used spinal coding as shown in Table 1 and development of other tables for various other codes. Overall it is important to code appropriately.

Even though it is difficult and time consuming, it is mandatory to appropriately code for proper reimbursement.

4.0 Conclusion

ICD-10-CM coding has arrived. It is an unfunded mandate. One must pursue its use or your practice will perish. There is no choice. It is crucial that we as inter-ventional pain physicians identify commonly used codes and code properly. Rarely used codes can be written with the description of the disorder and then looked up in the computer, or billing personnel may look into them, returning for confirmation from the physician. Educational forums, communication with experienced and knowledgeable healthcare stakeholders, and significant time and effort to understand ICD-10-CM coding will all be needed to ultimately succeed in the face of another enormous challenge for interventional pain physicians.

Appendix 1. *Conversion of lumbosacral spinal codes from ICD-9-CM to ICD-10-CM*.

	Code Description	ICD-9 CM	ICD-10 CM
1	Lumbar disc displacement w/o myelopathy	722.10	M51.26 Other intervertebral disc displacement, lumbar region
			M51.27 Other intervertebral disc displacement, lumbosacral region
2	Lumbar disc degeneration	722.52	M51.36 Other intervertebral disc degeneration, lumbar region
			M51.37 Other intervertebral disc degeneration, lumbosacral region
3	Lumbar radiculopathy (unspecified)	724.4	M54.16 Radiculopathy, lumbar region
			M54.17 Radiculopathy, lumbosacral region
4	Lumbar disc disorder with radiculopathy	NA	M51.86 Other intervertebral disc disorder, lumbar region
			M51.87 Other intervertebral disc disorders, lumbosacral region
			M51.16 Intervertebral disc disorders with radiculopathy, lumbar region
			M51.17 Intervertebral disc disorders with radiculopathy, lumbosacral region
5	Lumbar disc disorder with myelopathy	722.73	M51.06 Intervertebral disc disorders with myelopathy, lumbar region
6	Low back pain Sciatica	724.2 724.3	M54.5 Low back pain
			M54.31 Sciatica, right side
			M54.32 Sciatica, left side
			M54.41 Lumbago with sciatica, right side
			M54.42 Lumbago with sciatica, left side
7	Lumbar facet joint arthropathy (spondylosis without myelopathy or radiculopathy)	721.3	M47.816 Spondylosis without myelopathy or radiculopathy, lumbar region
			M47.817 Spondylosis without myelopathy or radiculopathy, lumbosacral region
8	Lumbar spondylosis with radiculopathy	NA	M47.26 Other spondylosis with radiculopathy, lumbar region
			M47.27 Other spondylosis with radiculopathy, lumbosacral region
9	Lumbar spondylosis with myelopathy	721.42	M47.16 Other spondylosis with myelopathy, lumbar region
10	Lumbar spinal stenosis or neural canal stenosis with or without neurogenic claudication	724.02 724.03	M48.06 Spinal stenosis, lumbar region
			M48.07 Spinal stenosis, lumbosacral region
			M99.23 Subluxation stenosis of neural canal of lumbar region
			M99.33 Osseous stenosis of neural canal of lumbar region
			M99.43 Connective tissue stenosis of neural canal of lumbar region
			M99.53 Intervertebral disc stenosis of neural canal of lumbar region
			M99.63 Osseous and subluxation stenosis of intervertebral foramina of lumbar region
			M99.73 Connective tissue and disc stenosis of intervertebral foramina of lumbar region
11	Acquired spondylolisthesis	738.4	M43.06 Spondylolysis, lumbar region
			M43.07 Spondylolysis, lumbosacral region
			M43.16 Spondylolisthesis, lumbar region
			M43.17 Spondylolisthesis, lumbosacral region
12	Congenial spondylolysis , lumbosacral region	756.11	Q76.2 Congenital spondylolisthesis
	Congenital spondylolisthesis	756.12	
13	Cauda equina syndrome with or without neurogenic bladder	344.60 344.61	G83.4 Cauda equina syndrome
14	Spina bifida, lumbar region, with or without hydrocephalus	741.93 741.03	Q05.7 Lumbar spina bifida without hydrocephalus Q05.2 Lumbar spina bifida with hydrocephalus
15	Spina bifida occulta	756.17	Q76.0 Spina bifida occulta
16	Postlaminectomy syndrome of lumbar region	722.83	M96.1 Postlaminectomy syndrome, not elsewhere classified
17	Lumbar epidural fibrosis	349.2	G96.12 Meningeal adhesions (cerebral) (spinal)
18	Arachnoiditis	322.9	G03.9 Meningitis, unspecified

Appendix 1 (cont.). *Conversion of lumbosacral spinal codes from ICD-9-CM to ICD-10-CM.*

	Code Description	ICD-9 CM	ICD-10 CM
19	Lumbosacral root lesions not elsewhere classified	353.4	G54.4 Lumbosacral root disorders, not elsewhere classified
20	Lumbosacral plexus lesions	353.1	G54.1 Lumbosacral plexus disorders
21	Schmorl's nodes of lumbar regions	722.32	M51.46 Schmorl's nodes, lumbar region
			M51.47 Schmorl's nodes, lumbosacral region
22	Other and unspecified disc disorder of lumbar region (includes discitis)	722.93	M46.36 Infection of intervertebral disc (pyogenic), lumbar region
			M46.37 Infection of intervertebral disc (pyogenic), lumbosacral region
			M51.86 Other intervertebral disc disorders, lumbar region
			M51.87 Other intervertebral disc disorders, lumbosacral region
23	Lumbar sprain (see also additional 7th character options for ICD-10-CM codes)	847.2	S33.5XXA Sprain of ligaments of lumbar spine, initial encounter
			S33.5XXD Sprain of ligaments of lumbar spine, subsequent encounter
			S39.012A Strain of muscle, fascia and tendon of lower back, initial encounter
			S39.012D Strain of muscle, fascia and tendon of lower back, subsequent encounter
24	Disorders of sacrum	720.2	M46.1 Sacroiliitis, not elsewhere classified
		724.6	M53.3 Sacrococcygeal disorders, not elsewhere classified
			M43.27 Fusion of spine, lumbosacral region
			M43.28 Fusion, sacral and sacrococcygeal region
			M53.2X7 Spinal instabilities, lumbosacral region
			M53.2X8 Spinal instabilities, sacral and sacrococcygeal region
25	Closed fracture of lumbar vertebra without spinal cord injury (see also additional 7th character options for ICD-10-CM codes)	805.4	S32.010A Wedge compression fracture of first lumbar vertebra, initial encounter for closed fracture
			S32.010D Wedge compression fracture of first lumbar vertebra, subsequent encounter with routine healing
			S32.011A Stable burst fracture of first lumbar vertebra, initial encounter for closed fracture
			S32.011D Stable burst fracture of first lumbar vertebra, subsequent encounter with routine healing
			S32.012A Unstable burst fracture of first lumbar vertebra, initial encounter for closed fracture
			S32.012D Unstable burse fracture of first lumbar vertebra, subsequent encounter with routine healing
			S32.020A Wedge compression fracture of second lumbar vertebra, initial encounter for closed fracture
			S32.020D Wedge compression fracture of second lumbar vertebra, subsequent encounter with routine healing
			S32.021A Stable burst fracture of second lumbar vertebra, initial encounter for closed fracture
			S32.021D Stable burst fracture of second lumbar vertebra, subsequent encounter with routine healing
			S32.022A Unstable burst fracture of second lumbar vertebra, initial encounter for closed fracture
			S32.022D Unstable burse fracture of second lumbar vertebra, subsequent encounter with routine healing
			S32.030A Wedge compression fracture of third lumbar vertebra, initial encounter for closed fracture
			S32.030D Wedge compression fracture of third lumbar vertebra, subsequent encounter with routine healing
			S32.031A Stable burst fracture of third lumbar vertebra, initial encounter for closed fracture
			S32.031D Stable burst fracture of third lumbar vertebra, subsequent encounter with routine healing
			S32.032A Unstable burst fracture of third lumbar vertebra, initial encounter for closed fracture
			S32.032D Unstable burse fracture of third lumbar vertebra, subsequent encounter with routine healing
			S32.040A Wedge compression fracture of fourth lumbar vertebra, initial encounter for closed fracture
			S32.040D Wedge compression fracture of fourth lumbar vertebra, subsequent encounter with routine healing
			S32.041A Stable burst fracture of fourth lumbar vertebra, initial encounter for closed fracture
			S32.041D Stable burst fracture of fourth lumbar vertebra, subsequent encounter with routine healing
			S32.042A Unstable burst fracture of fourth lumbar vertebra, initial encounter for closed fracture
			S32.042D Unstable burse fracture of fourth lumbar vertebra, subsequent encounter with routine healing
			S32.050A Wedge compression fracture of fifth lumbar vertebra, initial encounter for closed fracture
			S32.050D Wedge compression fracture of fifth lumbar vertebra, subsequent encounter with routine healing
			S32.051A Stable burst fracture of fifth lumbar vertebra, initial encounter for closed fracture
			S32.051D Stable burst fracture of fifth lumbar vertebra, subsequent encounter with routine healing
			S32.052A Unstable burst fracture of fifth lumbar vertebra, initial encounter for closed fracture
			S32.052D Unstable burse fracture of fifth lumbar vertebra, subsequent encounter with routine healing

Appendiz 1 (cont.). *Conversion of lumbosacral spinal codes from ICD-9-CM to ICD-10-CM.*

		Code Description	ICD-9 CM	ICD-10 CM
26		Pathologic fracture of vertebrae ICD-9 and ICD-10: same for all spinal regions (see also additional 7th character options for ICD-10-CM codes)	733.13	M80.08XA Age-related osteoporosis with current pathologic fracture, vertebra(e), initial encounter for fracture
				M80.08XD Age-related osteoporosis with current pathologic fracture, vertebra(e), subsequent encounter for fracture with routine healing
				M80.88XA Other osteoporosis with current pathologic fracture, vertebra(e), initial encounter for fracture
				M80.88XD Other osteoporosis with current pathologic fracture, vertebra(e), subsequent encounter for fracture with routine healing
				M84.58XA Pathologic fracture in neoplastic disease, other specified site, initial encounter for fracture [includes vertebra(e)]
				M84.58XD Pathologic fracture in neoplastic disease, other specified site, subsequent encounter for fracture with routine healing [includes vertebra(e)]
				M84.68XA Pathologic fracture in other disease, other specified site, initial encounter for fracture [includes vertebra(e)]
				M84.68XD Pathologic fracture in other disease, other specified site, subsequent encounter for fracture with routine healing [includes vertebra(e)]

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

Appendix 2. *Conversion of cervical spinal codes from ICD-9-CM to ICD-10-CM.*

	Code Description	ICD-9 CM	ICD-10 CM
1	Cervical disc displacement w/o myelopathy	722.0	M50.21 Other cervical disc displacement, high cervical region (C2/3, C3/4)
			M50.22 Other cervical disc displacement, mid-cervical region (C4/5, C6/7)
			M50.23 Other cervical disc displacement, cervicothoracic region (C7/T1)
2	Cervical disc disorders	NA	M50.81 Other cervical disc disorders, high cervical region (C2/3, C3/4)
			M50.82 Other cervical disc disorders, mid-cervical region (C4/5, C6/7)
			M50.83 Other cervical disc disorders, cervicothoracic region (C7/T1)
			M50.91 Cervical disc disorder, unspecified, high cervical region (C2/3, C3/4)
			M50.92 Cervical disc disorder, unspecified, mid-cervical region (C4/5, C6/7)
			M50.93 Cervical disc disorder, unspecified, cervicothoracic region
3	Cervical disc degeneration	722.4	M50.31 Other cervical disc degeneration, high cervical region (C2/3, C3/4)
			M50.32 Other cervical disc degeneration, mid-cervical region (C4/5, C6/7)
			M50.33 Other cervical disc degeneration, cervicothoracic region (C7/T1)
4	Cervical radiculopathy	723.4	M54.12 Radiculopathy, cervical region
			M54.13 Radiculopathy, cervicothoracic region
5	Cervical disc disorder with radiculopathy	NA	M50.11 Cervical disc disorder with radiculopathy, high cervical region (C2/3, C3/4)
			M50.12 Cervical disc disorder with radiculopathy, mid-cervical region (C4/5, C6/7)
			M50.13 Cervical disc disorder with radiculopathy, cervicothoracic region (C7/T1)
6	Cervical disc disorder with myelopathy	722.71	M50.01 Cervical disc disorder with myelopathy, high cervical region (C2/3, C3/4)
			M50.02 Cervical disc disorder with myelopathy, mid-cervical region (C4/5, C6/7)
			M50.03 Cervical disc disorder with myelopathy, cervicothoracic region (C7/T1)
7	Cervical facet joint arthropathy (spondylosis without myelopathy) or Radiculopathy	721.0	M47.811 Spondylosis without myelopathy or radiculopathy, occipito-atlanto-axial region
			M47.812 Spondylosis without myelopathy or radiculopathy, cervical region
			M47.813 Spondylosis without myelopathy or radiculopathy, cervicothoracic region

Appendiz 2 (cont.). *Conversion of cervical spinal codes from ICD-9-CM to ICD-10-CM.*

	Code Description	ICD-9 CM	ICD-10 CM
8	Cervical spondylosis with radiculopathy	NA	M47.21 Other spondylosis with radiculopathy, occipito-atlanto-axial region
			M47.11 Other spondylosis with myelopathy, occipito-atlanto-axial region
			M47.22 Other spondylosis with radiculopathy, cervical region
			M47.23 Other spondylosis with radiculopathy, cervicothoracic region
9	Cervical spondylosis with myelopathy	721.1	M47.12 Other spondylosis with myelopathy, cervical region
			M47.13 Other spondylosis with myelopathy, cervicothoracic region
10	Cervical spinal stenosis without my-elopathy, or radiculopathy	723.0	M48.02 Spinal stenosis, cervical region
			M48.03 Spinal stenosis, cervicothoracic region
			M99.21 Subluxation stenosis of neural canal of cervical region
			M99.31 Osseous stenosis of neural canal of cervical region
			M99.41 Connective tissue stenosis of neural canal of cervical region
			M99.51 Intervertebral disc stenosis of neural canal of cervical region
			M99.61 Osseous and subluxation stenosis of intervertebral foramina of cervical region
			M99.71 Connective tissue and disc stenosis of intervertebral foramina of cervical region
11	Cervical spondylolysis or spondylolisthesis	738.4	M43.02 Spondylolysis, cervical region
			M43.03 Spondylolysis, cervicothoracic region
			M43.12 Spondylolisthesis, cervical region
			M43.13 Spondylolisthesis, cervicothoracic region
12	Cervical congenital spondylolisthesis	756.12	Q76.2 Congenital spondylolisthesis
13	Cervical epidural fibrosis/ arachnoiditis	349.2 322.9	G96.12 Meningeal adhesions (cerebral) (spinal)
14	Cervical post laminectomy syndrome	722.81	M96.1 Postlaminectomy syndrome, not elsewhere classified (same for all spinal regions)
15	Cervical root lesions not elsewhere classified	353.2	G54.2 Cervical root disorders, not elsewhere classified
16	Cervical brachial plexus lesions	353.1	G54.0 Brachial plexus disorders
17	Cervico-occipital neuralgia	723.8	M54.81 Occipital neuralgia
18	Neck sprain (see also additional 7th character options for ICD-10-CM codes)	847.0	S13.4XXA Sprain of ligaments of cervical spine, initial encounter
			S13.4XXD Sprain of ligaments of cervical spine, subsequent encounter
			S13.8XXA Sprain of joints and ligaments of other parts of neck, initial encounter
			S13.8XXD Sprain of joints and ligaments of other parts of neck, subsequent encounter
			S16.1XXA Strain of muscle, fascia and tendon at neck level, initial encounter
			S16.1XXD Strain of muscle, fascia and tendon at neck level, subsequent encounter
19	Cervicalgia	723.1	M54.2 Cervicalgia

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

Appendix 3. *Conversion of thoracic spinal codes from ICD-9-CM to ICD-10-CM.*

s	Code Description	ICD-9 CM	ICD-10 CM
1	Thoracic disc displacement w/o myelopathy	722.11	M51.24 Other intervertebral disc displacement, thoracic region
			M51.25 Other intervertebral disc displacement, thoracolumbar region
2	Thoracic disc degeneration	722.51	M51.34 Other intervertebral disc degeneration, thoracic region
			M51.35 Other intervertebral disc degeneration, thoracolumbar region
3	Thoracic radiculopathy	724.4	M54.14 Radiculopathy, thoracic region
			M54.15 Radiculopathy, thoracolumbar region
4	Other thoracic disc disorders	NA	M51.84 Other intervertebral disc disorders, thoracic region
			M51.85 Other intervertebral disc disorders, thoracolumbar region
5	Thoracic disc disorder with radiculopathy	NA	M51.14 Sprain of other specified parts of thorax, subsequent encounter
			M51.15 Sprain of ligaments of thoracic spine, subsequent encounter
6	Thoracic disc disorder with myelopathy	722.72	M51.04 Intervertebral disc disorders with myelopathy, thoracic region
			M51.05 Intervertebral disc disorders with myelopathy, thoracolumbar region
7	Thoracic facet joint arthropathy (spondylosis without myelopathy or radiculopathy)	721.2	M47.814 Spondylosis without myelopathy or radiculopathy, thoracic region
			M47.815 Spondylosis without myelopathy or radiculopathy, thoracolumbar region
8	Thoracic spondylosis with radiculopathy	NA	M47.24 Other spondylosis with radiculopathy, thoracic region
			M47.25 Other spondylosis with radiculopathy, thoracolumbar region
9	Thoracic spondylosis with myelopathy	721.41	M47.14 Other spondylosis with myelopathy, thoracic region
			M47.15 Other spondylosis with myelopathy, thoracolumbar region
10	Thoracic spinal stenosis or neural canal stenosis	724.01	M48.04 Spinal stenosis, thoracic region
			M48.05 Spinal stenosis, thoracolumbar region
			M99.22 Subluxation stenosis of neural canal of thoracic region
			M99.32 Osseous stenosis of neural canal of thoracic region
			M99.42 Connective tissue stenosis of neural canal of thoracic region
			M99.52 Intervertebral disc stenosis of neural canal of thoracic region
			M99.62 Osseous and subluxation stenosis of intervertebral foramina of thoracic region
			M99.72 Connective tissue and disc stenosis of intervertebral foramina of thoracic region
11	Thoracic spondylolysis or spondylolisthesis	738.4	M43.04 Spondylolysis, thoracic region
			M43.05 Spondylolysis, thoracolumbar region
			M43.14 Spondylolisthesis, thoracic region
			M43.15 Spondylolisthesis, thoracolumbar region
12	Thoracic congenital spondylolisthesis	756.12	Q76.2 Congenital spondylolisthesis
13	Disorders of meninges not else-where classified	349.2	G96.12 Meningeal adhesions (cerebral) (spinal) (same for all spinal regions)
	Meningitis unspecified	322.9	G03.9 Meningitis, unspecified (same for all spinal regions)
14	Thoracic Schmorl's nodes	722.31	M51.44 Schmorl's nodes, thoracic region
15	Thoracic post laminectomy syndrome	722.82	M96.1 Postlaminectomy syndrome, not elsewhere classified
16	Thoracic root lesions not elsewhere classified	353.3	G54.3 Thoracic root disorders, not elsewhere classified
	Other nerve root and plexus disorders (includes intercostal neuritis)	354.8	G58.0 Intercostal neuropathy
17	Thoracic discitis	722.92	M46.44 Discitis, unspecified, thoracic region
			M46.45 Discitis, unspecified, thoracolumbar region
18	Thoracic strain	847.1	S23.3XXA Sprain of ligaments of thoracic spine, initial encounter
			S23.8XXA Sprain of other specified parts of thorax, initial encounter
19	Thoracic or chest wall pain	724.1	M94.0 Chondrocostal junction syndrome [Tietze]
			N64.4 Mastodynia
			R07.1 Chest pain - on breath
			R07.2 Precordial pain
			R07.81 Pleurodynia
			R07.82 Intercostal
			M54.6 Pain in thoracic spine

Appendix 3 (cont.). *Conversion of thoracic spinal codes from ICD-9-CM to ICD-10-CM.*

s	Code Description	ICD-9 CM	ICD-10 CM
20	Closed fracture of dorsal (thoracic) vertebra without spinal cord injury (see also additional 7th character options for ICD-10-CM codes)	805.2	S22.010A Wedge compression fracture of first thoracic vertebra, initial encounter for closed fracture
			S22.010D Wedge compression fracture of first thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.011A Stable burst fracture of first thoracic vertebra, initial encounter for closed fracture
			S22.011D Stable burst fracture of first thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.012A Unstable burst fracture of first thoracic vertebra, initial encounter for closed fracture
			S22.012D Unstable burst fracture of first thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.020A Wedge compression fracture of second thoracic vertebra, initial encounter for closed fracture
			S22.020D Wedge compression fracture of second thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.021A Stable burst fracture of second thoracic vertebra, initial encounter for closed fracture
			S22.021D Stable burst fracture of second thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.022A Unstable burst fracture of second thoracic vertebra, initial encounter for closed fracture
			S22.022D Unstable burst fracture of second thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.030A Wedge compression fracture of third thoracic vertebra, initial encounter for closed fracture
			S22.030D Wedge compression fracture of third thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.031A Stable burst fracture of third thoracic vertebra, initial encounter for closed fracture
			S22.031D Stable burst fracture of third thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.032A Unstable burst fracture of third thoracic vertebra, initial encounter for closed fracture
			S22.032D Unstable burst fracture of third thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.040A Wedge compression fracture of fourth thoracic vertebra, initial encounter for closed fracture
			S22.040D Wedge compression fracture of fourth thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.041A Stable burst fracture of fourth thoracic vertebra, initial encounter for closed fracture
			S22.041D Stable burst fracture of fourth thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.042A Unstable burst fracture of fourth thoracic vertebra, initial encounter for closed fracture
			S22.042D Unstable burst fracture of fourth thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.050A Wedge compression fracture of T5-T6 thoracic vertebra, initial encounter for closed fracture
			S22.050D Wedge compression fracture of T5-T6 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.051A Stable burst fracture of T5-T6 thoracic vertebra, initial encounter for closed fracture
			S22.051D Stable burst fracture of T5-T6 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.052A Unstable burst fracture of T5-T6 thoracic vertebra, initial encounter for closed fracture
			S22.052D Unstable burst fracture of T5-T6 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.060A Wedge compression fracture of T7-T8 thoracic vertebra, initial encounter for closed fracture
			S22.060D Wedge compression fracture of T7-T8 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.061A Stable burst fracture of T7-T8 thoracic vertebra, initial encounter for closed fracture
			S22.061D Stable burst fracture of T7-T8 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.062A Unstable burst fracture of T7-T8 thoracic vertebra, initial encounter for closed fracture
			S22.062D Unstable burst fracture of T7-T8 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.070A Wedge compression fracture of T9-T10 thoracic vertebra, initial encounter for closed fracture
			S22.070D Wedge compression fracture of T9-T10 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.071A Stable burst fracture of T9-T10 thoracic vertebra, initial encounter for closed fracture
			S22.071D Stable burst fracture of T9-T10 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.072A Unstable burst fracture of T9-T10 thoracic vertebra, initial encounter for closed fracture
			S22.072D Unstable burst fracture of T9-T10thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.080A Wedge compression fracture of T11-T12 thoracic vertebra, initial encounter for closed fracture
			S22.080D Wedge compression fracture of T11-T12 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.081A Stable burst fracture of T11-T12 thoracic vertebra, initial encounter for closed fracture
			S22.081D Stable burst fracture of T11-T12 thoracic vertebra, subsequent encounter for fracture with routine healing
			S22.082A Unstable burst fracture of T11-T12 thoracic vertebra, initial encounter for closed fracture
			S22.082D Unstable burst fracture of T11-T12 thoracic vertebra, subsequent encounter for fracture with routine healing

Appendix 3 (cont.). *Conversion of thoracic spinal codes from ICD-9-CM to ICD-10-CM*.

s	Code Description	ICD-9 CM	ICD-10 CM
21	Pathologic fracture of vertebrae ICD-9 and ICD-10: same for all spinal regions (see also additional 7th character options for ICD-10-CM codes)	733.13	M80.08XA Age-related osteoporosis with current pathologic fracture, vertebra(e), initial encounter for fracture
			M80.08XD Age-related osteoporosis with current pathologic fracture, vertebra(e), subsequent encounter for fracture with routine healing
			M80.88XA Other osteoporosis with current pathologic fracture, vertebra(e), initial encounter for fracture
			M80.88XD Other osteoporosis with current pathologic fracture, vertebra(e), subsequent encounter for fracture with routine healing
			M84.58XA Pathologic fracture in neoplastic disease, other specified site, initial encounter for fracture [includes vertebra(e)]
			M84.58XD Pathologic fracture in neoplastic disease, other specified site, subsequent encounter for fracture with routine healing [includes vertebra(e)]
			M84.68XA Pathologic fracture in other disease, other specified site, initial encounter for fracture [includes vertebra(e)]
			M84.68XD Pathologic fracture in other disease, other specified site, subsequent encounter for fracture with routine healing [includes vertebra(e)]

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

Appendix 4. *Conversion of RSD/causalgia/neuropathy codes from ICD-9-CM to ICD-10-CM*.

ICD-9-CM	ICD-10-CM
1. Reflex Sympathetic Dystrophy	
337.21 Upper extremity	G90.511 Complex regional pain syndrome I of right upper limb
	G90.512 Complex regional pain syndrome I of left upper limb
	G90.513 Complex regional pain syndrome I of upper limb, bilateral
337.22 Lower extremity	G90.521 Complex regional pain syndrome I of right lower limb
	G90.522 Complex regional pain syndrome I of left lower limb
	G90.523 Complex regional pain syndrome I of lower limb, bilateral
337.29 Specified area	G90.59 Complex regional pain syndrome I of other specified site
2. Causalgia	
354.4 Upper limb	G56.41 Causalgia of right upper limb
	G56.42 Causalgia of left upper limb
355.71 Lower limb	G57.71 Causalgia of right lower limb
	G57.72 Causalgia of left lower limb
3. 353.6 Phantom limb pain	G54.6 Phantom limb syndrome with pain
	G54.7 Phantom limb syndrome without pain
4. Neuropathic	
337.1 Peripheral autonomic neuropathy	G99.0 Autonomic neuropathy in diseases classified elsewhere
	E08.41 Diabetes mellitus due to underlying condition with diabetic mononeuropathy
	E09.41 Drug or chemical induced diabetes mellitus with neurological complications with diabetic mononeuropathy
	E10.41 Type 1 diabetes mellitus with diabetic mononeuropathy
	E11.41 Type 2 diabetes mellitus with diabetic mononeuropathy
	E13.41 Other specified diabetes mellitus with diabetic mononeuropathy
5. 354.3 Lesion of radial nerve	G56.31 Lesion of radial nerve, right upper limb
	G56.32 Lesion of radial nerve, left upper limb
6. 355.1 Meralgia paresthetica	G57.11 Meralgia paresthetica, right lower limb
	G57.12 Meralgia paresthetica, left lower limb
7. 355.2 Other lesion of femoral nerve	G57.21 Lesion of femoral nerve, right lower limb
	G57.22 Lesion of femoral nerve, left lower limb
8. 355.3 Lesion of lateral popliteal nerve	G57.31 Lesion of lateral popliteal nerve, right lower limb
	G57.32 Lesion of lateral popliteal nerve, left lower limb
9. 355.4 Lesion of medial popliteal nerve	G57.41 Lesion of medial popliteal nerve, right lower limb
	G57.42 Lesion of medial popliteal nerve, left lower limb
10. 355.5 Tarsal tunnel syndrome	G57.51 Tarsal tunnel syndrome, right lower limb
	G57.52 Tarsal tunnel syndrome, left lower limb
11. 355.6 Lesion of plantar nerve	G57.61 Lesion of plantar nerve, right lower limb
	G57.62 Lesion of plantar nerve, left lower limb

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted from this table.

Appendix 5. *Conversion of headache disorders, facial neuralgias, and sleep disorders.*

ICD-9-CM	ICD-10-CM
1. Migraine	
346.12 Migraine without aura, without mention of intractable migraine with status migrainosus	G43.001 Migraine without aura, not intractable with status migrainosus
346.10 Migraine without aura, without mention of intractable migraine without mention of status migrainosus	G43.009 Migraine without aura, not intractable without status migrainosus
346.13 Migraine without aura, with intractable migraine, so stated, with status migrainosus	G43.011 Migraine without aura, intractable, with status migrainosus
346.11 Migraine without aura, with intractable migraine, so stated, without mention of status migrainosus	G43.019 Migraine without aura, intractable, without status migrainosus
346.02 Migraine with aura, without mention of intractable migraine with status migrainosus	G43.101 Migraine with aura, not intractable, with status migrainosus
346.00 Migraine with aura, without mention of intractable migraine without mention of status migrainosus	G43.109 Migraine with aura, not intractable, without status migrainosus
346.03 Migraine with aura, with intractable migraine, so stated, with status migrainosus	G43.111 Migraine with aura, intractable, with status migrainosus
346.01 Migraine with aura, with intractable migraine, so stated, without mention of status migrainosus	G43.119 Migraine with aura, intractable, without status migrainosus
346.72 Chronic migraine without aura, without mention of intractable migraine with status migrainosus	G43.701 Chronic migraine without aura, not intractable, with status migrainosus
346.70 Chronic migraine without aura, without mention of intractable migraine without mention of status migrainosus	G43.709 Chronic migraine without aura, not intractable, without status migrainosus
346.73 Chronic migraine without aura, with intractable migraine, so stated, with status migrainosus	G43.711 Chronic migraine without aura, intractable, with status migrainosus
346.71 Chronic migraine without aura, with intractable migraine, so stated, without mention of status migrainosus	G43.719 Chronic migraine without aura, intractable, without status migrainosus
346.20 Variants of migraine, not elsewhere classified, without mention of intractable migraine without mention of status migrainosus	G43.B0 Ophthalmoplegic migraine, not intractable
346.21 Variants of migraine, not elsewhere classified, with intractable migraine, so stated, without mention of status migrainosus	G43.B1 Ophthalmoplegic migraine, intractable
346.92 Migraine, unspecified, without mention of intractable migraine with status migrainosus	G43.901 Migraine, unspecified, not intractable, with status migrainosus
346.90 Migraine, unspecified, without mention of intractable migraine without mention of status migrainosus	G43.909 Migraine, unspecified, not intractable, without status migrainosus
346.93 Migraine, unspecified, with intractable migraine, so stated, with status migrainosus	G43.911 Migraine, unspecified, intractable, with status migrainosus
346.91 Migraine, unspecified, with intractable migraine, so stated, without mention of status migrainosus	G43.919 Migraine, unspecified, intractable, without status migrainosus
2. Cluster headaches	
339.00 Cluster headache syndrome, unspecified	G44.001 Cluster headache syndrome, unspecified, intractable
	G44.009 Cluster headache syndrome, unspecified, not intractable
339.01 Episodic cluster headache	G44.011 Episodic cluster headache, intractable
	G44.019 Episodic cluster headache, not intractable
339.02 Chronic cluster headache	G44.021 Chronic cluster headache, intractable
	G44.029 Chronic cluster headache, not intractable
339.03 Episodic paroxysmal hemicrania	G44.031 Episodic paroxysmal hemicrania, intractable
	G44.039 Episodic paroxysmal hemicrania, not intractable
339.04 Chronic paroxysmal hemicrania	G44.041 Chronic paroxysmal hemicrania, intractable
	G44.049 Chronic paroxysmal hemicrania, not intractable

Appendix 5 (cont.). *Conversion of headache disorders, facial neuralgias, and sleep disorders.*

3. Tension-type headache	
339.10 Tension type headache, unspecified	G44.201 Tension-type headache, unspecified, intractable
307.81 Tension headache	G44.209 Tension-type headache, unspecified, not intractable
339.10 Tension type headache, unspecified	
339.11 Episodic tension type headache	G44.211 Episodic tension-type headache, intractable
	G44.219 Episodic tension-type headache, not intractable
339.12 Chronic tension type headache	G44.221 Chronic tension-type headache, intractable
	G44.229 Chronic tension-type headache, not intractable
339.20 Post-traumatic headache, unspecified	G44.301 Post-traumatic headache, unspecified, intractable
	G44.309 Post-traumatic headache, unspecified, not intractable
339.22 Chronic post-traumatic headache	G44.321 Chronic post-traumatic headache, intractable
	G44.329 Chronic post-traumatic headache, not intractable
4. Drug-induced headache	
339.3 Drug induced headache, not elsewhere classified	G44.40 Drug-induced headache, not elsewhere classified, not intractable
	G44.41 Drug-induced headache, not elsewhere classified, intractable
5. Vertebro-basilar artery syndrome	
435.0 Basilar artery syndrome	G45.0 Vertebro-basilar artery syndrome
435.1 Vertebral artery syndrome	
435.3 Vertebrobasilar artery syndrome	
6. Sleep disorders	
780.52 Insomnia, unspecified	G47.00 Insomnia, unspecified
327.00 Organic insomnia, unspecified	G47.01 Insomnia due to medical condition
327.01 Insomnia due to medical condition classified elsewhere	
327.10 Organic hypersomnia, unspecified	G47.10 Hypersomnia, unspecified
780.54 Hypersomnia, unspecified	
327.11 Idiopathic hypersomnia with long sleep time	G47.11 Idiopathic hypersomnia with long sleep time
327.12 Idiopathic hypersomnia without long sleep time	G47.12 Idiopathic hypersomnia without long sleep time
327.13 Recurrent hypersomnia	G47.13 Recurrent hypersomnia
327.14 Hypersomnia due to medical condition classified elsewhere	G47.14 Hypersomnia due to medical condition
327.21 Primary central sleep apnea	G47.31 Primary central sleep apnea
327.23 Obstructive sleep apnea (adult)(pediatric)	G47.33 Obstructive sleep apnea (adult) (pediatric)
327.26 Sleep related hypoventilation/hypoxemia in conditions classifiable elsewhere	G47.36 Sleep related hypoventilation in conditions classified elsewhere
327.27 Central sleep apnea in conditions classified elsewhere	G47.37 Central sleep apnea in conditions classified elsewhere
327.29 Other organic sleep apnea	G47.39 Other sleep apnea

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

Appendix 6 *Conversion of shoulder/elbow/hand codes from ICD-9-CM to ICD-10-CM*.

ICD-9-CM	ICD-10-CM
1. Shoulder	
719.41 Pain in joint involving shoulder region 729.5 Pain in limb	M25.511 Pain in right shoulder
	M25.512 Pain in left shoulder
	M79.621 Pain in right upper arm
	M79.622 Pain in left upper arm
726.12 Bicipital tenosynovitis	M75.21 Bicipital tendinitis, right shoulder
	M75.22 Bicipital tendinitis, left shoulder
726.10 Disorders of bursae and tendons in shoulder region unspecified (includes rotator cuff syndrome not otherwise specific and supraspinatus syndrome)	M66.211 Spontaneous rupture of extensor tendons, right shoulder
	M66.212 Spontaneous rupture of extensor tendons, left shoulder
	M66.811 Spontaneous rupture of other tendons, right shoulder
	M66.812 Spontaneous rupture of other tendons, left shoulder
	M75.51 Bursitis of right shoulder
	M75.52 Bursitis of left shoulder
726.2 Other affections of shoulder region not elsewhere classified (includes periarthritis of shoulder)	M25.711 Osteophyte, right shoulder
	M25.712 Osteophyte, left shoulder
	M75.31 Calcific tendinitis of right shoulder
	M75.32 Calcific tendinitis of left shoulder
	M75.41 Impingement syndrome of right shoulder
	M75.42 Impingement syndrome of left shoulder
	M75.81 Other shoulder lesions, right shoulder
	M75.82 Other shoulder lesions, left shoulder
716.11 Traumatic arthropathy involving shoulder region	M12.511 Traumatic arthropathy, right shoulder
	M12.512 Traumatic arthropathy, left shoulder
715.11 Osteoarthritis localized primary involving shoulder region	M19.011 Primary osteoarthritis, right shoulder
	M19.012 Primary osteoarthritis, left shoulder
923.00 Contusion of shoulder region	S40.011A Contusion of right shoulder, initial encounter
	S40.011D Contusion of right shoulder, subsequent encounter
	S40.012A Contusion of left shoulder, initial encounter
	S40.012D Contusion of left shoulder, subsequent encounter
726.0 Adhesive capsulitis of shoulder	M75.01 Adhesive capsulitis of right shoulder
	M75.02 Adhesive capsulitis of left shoulder
727.61 Complete rupture of rotator cuff	M75.121 Complete rotator cuff tear or rupture of right shoulder, not specified as traumatic
	M75.122 Complete rotator cuff tear or rupture of left shoulder, not specified as traumatic
726.11 Calcifying tendinitis of shoulder	M75.31 Calcific tendinitis of right shoulder
	M75.32 Calcific tendinitis of left shoulder
2. Elbow	
719.42 Pain in joint involving upper arm 729.5 Pain in limb	M25.521 Pain in right elbow
	M25.522 Pain in left elbow
	M79.631 Pain in right forearm
	M79.632 Pain in left forearm
726.31 Medial epicondylitis	M77.01 Medial epicondylitis, right elbow
	M77.02 Medial epicondylitis, left elbow
726.32 Lateral epicondylitis	M77.11 Lateral epicondylitis, right elbow
	M77.12 Lateral epicondylitis, left elbow

Appendix 6 (cont.) *Conversion of shoulder/elbow/hand codes from ICD-9-CM to ICD-10-CM.*

726.33 Olecranon bursitis	M70.21 Olecranon bursitis, right elbow
	M70.22 Olecranon bursitis, left elbow
715.12 Osteoarthritis localized primary involving upper arm	M19.021 Primary osteoarthritis, right elbow
	M19.022 Primary osteoarthritis, left elbow
716.12 Traumatic arthropathy involving upper arm	M12.521 Traumatic arthropathy, right elbow
	M12.522 Traumatic arthropathy, left elbow
923.11 Contusion of elbow	S50.01XA Contusion of right elbow, initial encounter
	S50.01XD Contusion of right elbow, subsequent encounter
	S50.02XA Contusion of left elbow, initial encounter
	S50.02XD Contusion of left elbow, subsequent encounter
3. Wrist/Hand	
719.43 Pain in joint involving forearm 719.44 Pain in joint involving hand 729.5 Pain in limb	M25.531 Pain in right wrist
	M25.532 Pain in left wrist
	M25.539 Pain in unspecified wrist
	M79.621 Pain in right upper arm
	M79.622 Pain in left upper arm
	M79.631 Pain in right forearm
	M79.632 Pain in left forearm
	M79.641 Pain in right hand
	M79.642 Pain in left hand
	M79.644 Pain in right finger(s)
	M79.645 Pain in left finger(s)
727.2 Specific bursitides often of occupational origin	M70.031 Crepitant synovitis (acute) (chronic), right wrist
	M70.032 Crepitant synovitis (acute) (chronic), left wrist
	M70.041 Crepitant synovitis (acute) (chronic), right hand
	M70.042 Crepitant synovitis (acute) (chronic), left hand
	M70.11 Bursitis, right hand
	M70.12 Bursitis, left hand
354.0 Carpal tunnel	G56.01 Carpal tunnel, right upper limb
	G56.02 Carpal tunnel, left upper limb
923.21 Contusion of Wrist (see also additional 7th character options for ICD-10-CM codes)	S60.211A Contusion of right wrist, initial encounter
	S60.211A Contusion of right wrist, subsequent encounter
	S60.212A Contusion of left wrist, initial encounter
	S60.212D Contusion of left wrist, subsequent encounter
923.20 Contusion of hand (see also additional 7th character options for ICD-10-CM codes)	S60.221A Contusion of right hand, initial encounter
	S60.221D Contusion of right hand, subsequent encounter
	S60.222A Contusion of left hand, initial encounter
	S60.222D Contusion of left hand, subsequent encounter
715.13 Osteoarthritis localized primary involving forearm	M19.031 Primary osteoarthritis, right wrist
	M19.032 Primary osteoarthritis, left wrist
715.14 Osteoarthrosis localized primary involving hand	M18.0 Bilateral primary osteoarthritis of first carpometacarpal joints
	M18.11 Unilateral primary osteoarthritis of first carpometacarpal joint, right hand
	M18.12 Unilateral primary osteoarthritis of first carpometacarpal joint, left hand
	M19.041Primary osteoarthritis, right hand
	M19.042 Primary osteoarthritis, left hand
716.19 Traumatic arthritis of multiple joints	M12.59 Traumatic arthropathy, multiple sites

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

Appendix 7 Conversion of pelvis/hip/knee/ankle codes from ICD-9-CM to ICD-10-CM.

ICD-9-CM	ICD-10-CM
1. Hip	
719.45 Pain in joint involving pelvic region and thigh 729.5 Pain in limb	M25.551 Pain in right hip
	M25.552 Pain in left hip
	M79.651 Pain in right thigh
	M79.652 Pain in left thigh
726.5 Enthesopathy of hip region	M70.61 Trochanteric bursitis, right hip
	M70.62 Trochanteric bursitis, left hip
355.1 Meralgia paresthetica	G57.11 Meralgia paresthetica, right lower limb
	G57.12 Meralgia paresthetica, left lower limb
715.15 Osteoarthritis localized primary involving pelvic region and thigh	M16.0 Bilateral primary osteoarthritis of hip
	M16.11 Unilateral primary osteoarthritis, right hip
	M16.12 Unilateral primary osteoarthritis, left hip
716.15 Traumatic arthropathy involving pelvic region and thigh	M12.551 Traumatic arthropathy, right hip
	M12.552 Traumatic arthropathy, left hip
2. Knee	
719.46 Pain in joint involving lower leg 729.5 Pain in limb	M25.561 Pain in right knee
	M25.562 Pain in left knee
	M79.604 Pain in right leg
	M79.605 Pain in left leg
	M79.661 Pain in right lower leg
	M79.662 Pain in left lower leg
715.16 Osteoarthritis localized primary involving lower leg	M17.0 Bilateral primary osteoarthritis of knee
	M17.11 Unilateral primary osteoarthritis, right knee
	M17.12 Unilateral primary osteoarthritis, left knee
716.16 Traumatic arthropathy involving lower leg	M12.561 Traumatic arthropathy, right knee
	M12.562 Traumatic arthropathy, left knee
717.49 Other derangement of lateral meniscus	M23.061 Cystic meniscus, other lateral meniscus, right knee
	M23.062 Cystic meniscus, other lateral meniscus, left knee
	M23.361 Other meniscus derangements, other lateral meniscus, right knee
	M23.362 Other meniscus derangements, other lateral meniscus, left knee
3. Ankle/Foot	
719.47 Pain in joint involving ankle or foot 729.5 Pain in limb	M79.671 Pain in right foot
	M79.672 Pain in left foot
	M25.571 Pain in right ankle and joints of right foot
	M25.572 Pain in left ankle and joints of left foot
	M79.674 Pain in right toe(s)
	M79.675 Pain in left toe(s)
355.6 Lesion of plantar nerve (Morton's Metatarsalgia)	G57.61 Lesion of plantar nerve, right lower limb
	G57.62 Lesion of plantar nerve, left lower limb
715.17 Osteoarthritis localized primary involving ankle/foot	M19.071 Primary osteoarthritis, right ankle and foot
	M19.072 Primary osteoarthritis, left ankle and foot
716.17 Traumatic arthropathy involving ankle and foot	M12.571 Traumatic arthropathy, right ankle and foot
	M12.572 Traumatic arthropathy, left ankle and foot
716.19 Traumatic arthropathy involving multiple joints	M12.59 Traumatic arthropathy, multiple sites

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

Appendix 8 *Conversion of psychological coding from ICD-9-CM to ICD-10-CM*.

ICD-9 CM	ICD-10 CM
307.80 Psychogenic pain, site unspecified	F45.41 Pain disorder exclusively related to psychological factors
307.89 Other, pain disorder related to psychological factors	F45.42 Pain disorder with related psychological factors
300.02 Generalized anxiety disorder	F41.1 Generalized anxiety disorder
300.00 Anxiety state (unspecified)	F41.9 Anxiety disorder, unspecified
311 Depressive disorder not elsewhere classified	F32.9 Major depressive disorder, single episode, unspecified
296.21 Major depressive affective disorder, single episode, mild	F32.0 Major depressive disorder, single episode, mild
296.22 Major depressive affective disorder, single episode, moderate	F32.1 Major depressive disorder, single episode, moderate
296.23 Major depressive affective disorder, single episode, severe, without mention of psychotic behavior	F32.2 Major depressive disorder, single episode, severe without psychotic features
296.24 Major depressive affective disorder, single episode, severe, specified as with psychotic behavior	F32.3 Major depressive disorder, single episode, severe with psychotic features
296.25 Major depressive affective disorder, single episode, in partial or unspecified remission	F32.4 Major depressive disorder, single episode, in partial remission
296.26 Major depressive affective disorder, single episode, in full remission	F32.5 Major depressive disorder, single episode, in full remission
296.31 Major depressive affective disorder, recurrent episode, mild	F33.0 Major depressive disorder, recurrent, mild
296.32 Major depressive affective disorder, recurrent episode, moderate	F33.1 Major depressive disorder, recurrent, moderate
296.33 Major depressive affective disorder, recurrent episode, severe, without mention of psychotic behavior	F33.2 Major depressive disorder, recurrent severe without psychotic features
296.34 Major depressive affective disorder, recurrent episode, severe, specified as with psychotic behavior	F33.3 Major depressive disorder, recurrent, severe with psychotic symptoms
296.35 Major depressive affective disorder, recurrent episode, in partial or unspecified remission	F33.41 Major depressive disorder, recurrent, in partial remission
296.30 Major depressive affective disorder, recurrent episode, unspecified	F33.9 Major depressive disorder, recurrent, unspecified
296.7 Bipolar disorder	F31.70 Bipolar disorder, currently in remission, most recent episode unspecified
	F31.71 Bipolar disorder, in partial remission, most recent episode hypomanic
	F31.72 Bipolar disorder, in full remission, most recent episode hypomanic
300.4 Dysthymic disorder	F34.1 Dysthymic disorder
300.81 Somatization disorder	F45.0 Somatization disorder
300.01 Panic disorder without agoraphobia	F41.0 Panic disorder [episodic paroxysmal anxiety] without agoraphobia
300.21 Agoraphobia with panic disorder	F40.01 Agoraphobia with panic disorder
309.81 Post traumatic stress disorder	F43.11 Post-traumatic stress disorder, acute
	F43.12 Post-traumatic stress disorder, chronic
300.3 Obsessive compulsive disorder	F42 Obsessive-compulsive disorder
295.0 Simple type schizophrenia, unspecified	F20.89 Other schizophrenia
302.70 Psychosexual dysfunction, unspecified	F52.9 Unspecified sexual dysfunction not due to a substance or known physiological condition
	R37 Sexual dysfunction, unspecified
327.01 Insomnia due to medical condition classified elsewhere	G47.01 Insomnia due to medical condition
314.01 Attention deficit disorder of childhood with hyperactivity (ADD)	F90.1 Attention-deficit hyperactivity disorder, predominantly hyperactive type
	F90.2 Attention-deficit hyperactivity disorder, combined type
	F90.8 Attention-deficit hyperactivity disorder, other type
295.10 Disorganized type schizophrenia, unspecified	F20.1 Disorganized schizophrenia

Appendix 8 (cont.). *Conversion of psychological coding from ICD-9-CM to ICD-10-CM.*

ICD-9 CM	ICD-10 CM
295.20 Catatonic type schizophrenia, unspecified	F20.2 Catatonic schizophrenia
295.30 Paranoid type schizophrenia, unspecified	F20.0 Paranoid schizophrenia
295.70 Schizoaffective disorder, unspecified	F25.8 Other schizoaffective disorders
	F25.1 Schizoaffective disorder, depressive type
	F25.0 Schizoaffective disorder, bipolar type

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

Appendix 9. *Conversion of drug abuse, dependency, and addiction codes from ICD-9-CM to ICD-10-CM.*

ICD-9 CM	ICD-10 CM
1. Nicotine Dependence	
305.1 Nondependent tobacco use disorder	F17.210 Nicotine dependence, cigarettes, uncomplicated
	F17.211 Nicotine dependence, cigarettes, in remission
	F17.220 Nicotine dependence, chewing tobacco, uncomplicated
	F17.221 Nicotine dependence, chewing tobacco, in remission
	F17.290 Nicotine dependence, other tobacco product, uncomplicated
	F17.291 Nicotine dependence, other tobacco product, in remission
2. Alcohol abuse and dependence	
303.93 Other and unspecified alcohol dependence, in remission	F10.21 Alcohol dependence, in remission
305.00 Alcohol abuse unspecified use	F10.10 Alcohol abuse, uncomplicated
305.01 Alcohol abuse continuous use	F10.120 Alcohol abuse with intoxication, uncomplicated
305.02 Alcohol abuse episodic use	F10.129 Alcohol abuse with intoxication, unspecified
3. Opioids	
304.00 Opioid type drug dependency unspecified use 304.01 Opioid type drug dependency continuous use 304.02 Opioid type drug dependency episodic use	F11.20 Opioid dependence, uncomplicated
	F11.21 Opioid dependence, in remission
	F11.220 Opioid dependence with intoxication, uncomplicated
	F11.221 Opioid dependence with intoxication delirium
	F11.222 Opioid dependence with intoxication with perceptual disturbance
	F11.229 Opioid dependence with intoxication, unspecified
	F11.23 Opioid dependence with withdrawal
	F11.24 Opioid dependence with opioid-induced mood disorder
	F11.250 Opioid dependence with opioid-induced psychotic disorder with delusions
	F11.251 Opioid dependence with opioid-induced psychotic disorder with hallucinations
	F11.259 Opioid dependence with opioid-induced psychotic disorder, unspecified
	F11.281 Opioid dependence with opioid-induced sexual dysfunction
	F11.282 Opioid dependence with opioid-induced sleep disorder
	F11.288 Opioid dependence with other opioid-induced disorder
	F11.29 Opioid dependence with unspecified opioid-induced disorder

Appendix 9 (cont). *Conversion of drug abuse, dependency, and addiction codes from ICD-9-CM to ICD-10-CM.*

ICD-9 CM	ICD-10 CM
305.50 Opioid abuse unspecified use 305.51 Opioid abuse continuous use 305.52 Opioid abuse episodic use	F11.10 Opioid abuse, uncomplicated
	F11.120 Opioid abuse with intoxication, uncomplicated
	F11.121 Opioid abuse with intoxication, delirium
	F11.122 Opioid abuse with intoxication with perceptual disturbance
	F11.129 Opioid abuse with intoxication, unspecified
	F11.14 Opioid abuse with opioid-induced mood disorder
	F11.150 Opioid abuse with opioid-induced psychotic disorder with delusions
	F11.151 Opioid abuse with opioid-induced psychotic disorder with hallucinations
	F11.159 Opioid abuse with opioid-induced psychotic disorder, unspecified
	F11.181 Opioid abuse with opioid-induced sexual dysfunction
	F11.182 Opioid abuse with opioid-induced sleep disorder
	F11.188 Opioid abuse with other opioid-induced disorder
	F11.19 Opioid abuse with unspecified opioid-induced disorder
NA	F11.90 Opioid use, unspecified, uncomplicated
	F11.920 Opioid use, unspecified with intoxication, uncomplicated
	F11.921 Opioid use, unspecified with intoxication delirium
	F11.922 Opioid use, unspecified with intoxication with perceptual disturbance
	F11.929 Opioid use, unspecified with intoxication, unspecified
	F11.93 Opioid use, unspecified with withdrawal
	F11.94 Opioid use, unspecified with opioid-induced mood disorder
	F11.950 Opioid use, unspecified with opioid-induced psychotic disorder with delusions
	F11.951 Opioid use, unspecified with opioid-induced psychotic disorder with hallucinations
	F11.959 Opioid use, unspecified with opioid-induced psychotic disorder, unspecified
	F11.981 Opioid use, unspecified with opioid-induced sexual dysfunction
	F11.982 Opioid use, unspecified with opioid-induced sleep disorder
	F11.988 Opioid use, unspecified with other opioid-induced disorder
	F11.99 Opioid use, unspecified with unspecified opioid-induced disorder
4. Marijuana	
304.30 Cannabis (Marijuana) drug dependency, unspecified 304.31 Cannabis (Marijuana) drug dependency, continuous 304.32 Cannabis (Marijuana) drug dependency, episodic	F12.20 Cannabis dependence, uncomplicated
	F12.21 Cannabis dependence, in remission
	F12.220 Cannabis dependence with intoxication, uncomplicated
	F12.221 Cannabis dependence with intoxication delirium
	F12.222 Cannabis dependence with intoxication with perceptual disturbance
	F12.229 Cannabis dependence with intoxication, unspecified
	F12.250 Cannabis dependence with psychotic disorder with delusions
	F12.251 Cannabis dependence with psychotic disorder with hallucinations
	F12.259 Cannabis dependence with psychotic disorder, unspecified
	F12.280 Cannabis dependence with cannabis-induced anxiety disorder
	F12.288 Cannabis dependence with other cannabis-induced disorder
	F12.29 Cannabis dependence with unspecified cannabis-induced disorder

Appendix 9 (cont). *Conversion of drug abuse, dependency, and addiction codes from ICD-9-CM to ICD-10-CM.*

ICD-9 CM	ICD-10 CM
5. Cocaine	
304.20 Cocaine drug dependency, unspecified 304.21 Cocaine drug dependence, continuous 304.22 Cocaine drug dependence, episodic	F14.20 Cocaine dependence, uncomplicated
	F14.220 Cocaine dependence with intoxication, uncomplicated
	F14.221 Cocaine dependence with intoxication delirium
	F14.222 Cocaine dependence with intoxication with perceptual disturbance
	F14.23 Cocaine dependence with withdrawal
	F14.24 Cocaine dependence with cocaine-induced mood disorder
	F14.250 Cocaine dependence with cocaine-induced psychotic disorder with delusions
	F14.251 Cocaine dependence with cocaine-induced psychotic disorder with hallucinations
	F14.259 Cocaine dependence with cocaine-induced psychotic disorder, unspecified
	F14.280 Cocaine dependence with cocaine-induced anxiety disorder
	F14.281 Cocaine dependence with cocaine-induced sexual dysfunction
	F14.282 Cocaine dependence with cocaine-induced sleep disorder
	F14.288 Cocaine dependence with other cocaine-induced disorder
	F14.29 Cocaine dependence with unspecified cocaine-induced disorder
6. Sedative, Hypnotic, and Anxiolytic	
304.10 Barbiturates/hypnotics drug dependency, unspecified 304.11 Barbiturates/hypnotics drug dependency, continuous 304.12 Barbiturates/hypnotics drug dependency, episodic	F13.20 Sedative, hypnotic or anxiolytic dependence, uncomplicated
	F13.220 Sedative, hypnotic or anxiolytic dependence with intoxication, uncomplicated
	F13.230 Sedative, hypnotic or anxiolytic dependence with withdrawal, uncomplicated
	F13.231 Sedative, hypnotic or anxiolytic dependence with withdrawal delirium
	F13.239 Sedative, hypnotic or anxiolytic dependence with withdrawal, unspecified
	F13.259 Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced psychotic disorder, unspecified
7. Amphetamine	
304.40 Amphetamine and other psychostimulant dependence, unspecified	F15.20 Other stimulant dependence, uncomplicated
304.41 Amphetamine and other psychostimulant dependence, continuous	
304.42 Amphetamine and other psychostimulant dependence, episodic	
304.43 Amphetamine and other psychostimulant dependence, in remission	F15.21 Other stimulant dependence, in remission
304.40 Amphetamine and other psychostimulant dependence, unspecified	F15.222 Other stimulant dependence with intoxication with perceptual disturbance

Note – All the unspecified ICD-10-CM codes and irrelevant codes have been deleted for this table.

Appendix 10. *Conversion of pain not elsewhere classified codes from ICD-9-CM to ICD-10-CM*.

Code Description	ICD-9 CM	ICD-10 CM
Central pain syndrome	338.0	G89.0 Central pain syndrome
Acute pain due to trauma	338.11	G89.11Acute pain due to trauma
Acute post-thoracotomy pain	338.12	G89.12 Acute post-thoracotomy pain
Other acute postoperative pain	338.18	G89.18 Other acute postprocedural pain
Other acute pain	338.19	R52 Pain unspecified (acute NOS)
Chronic pain due to trauma	338.21	G89.21 Chronic pain due to trauma
Chronic post-thoracotomy pain	338.22	G89.22 Chronic post-thoracotomy pain
Other chronic postoperative pain	338.28	G89.28 Other chronic postprocedural pain
Other chronic pain	338.29	G89.29 Other chronic pain
Neoplasm related pain	338.3	G89.3 Neoplasm related pain
Chronic pain syndrome	338.4	G89.4 Chronic pain syndrome

REFERENCES

1. Manchikanti L, Hirsch JA. Regulatory burdens of the Affordable Care Act. *Harvard Health Policy Rev* 2012; 13:9-12.

2. Manchikanti L, Kaye AD, Singh V, Boswell MV. The tragedy of the implementation of ICD-10-CM as ICD-10: Is the cart before the horse or is there a tragic paradox of misinformation and ignorance? *Pain Physician* 2015; 18:E485-E495.

3. Manchikanti L, Falco FJE, Helm II S, Hirsch JA. First, do no harm by adopting evidence-based policy initiatives: The overselling of ICD-10 by Congress with high expectations. *Pain Physician* 2015; 18:E107-E113.

4. Manchikanti L, Falco FJE, Hirsch JA. Necessity and implications of ICD-10: Facts and fallacies. *Pain Physician* 2011; 14:E405-E425.

5. Public Law No: 111-148: H.R. 3590. Patient Protection and Affordable Care Act. March 23, 2010.

6. Health Insurance Portability and Accountability Act (HIPAA) of 1996, P.L. 104-191, August 21, 1996.

7. Castelluccio J. Congress tackles EHR woes, information block, interoperability. *HIM-HIPPA Insider,* August 3, 2015.

8. McCarthy J. Doctors like EHRs even less than they did five years ago. *Healthcare IT News,* August 13, 2015.

9. Singer JA. How government killed the medical profession. *Cato Institute.*
www.cato.org/publications/commentary/how-government-killed-medical-profession

10. Manchikanti L, Benyamin RM, Falco FJE, Hirsch JA. Metamorphosis of medicine in the United States: A carrot and stick policy of electronic medical records. *Pain Physician* 2014; 17:E671-E680.

11. Manchikanti L, Benyamin RM, Falco FJE, Hirsch JA. Metamorphosis of medicine in the United States: Is information technology a white knight or killer whale? *Pain Physician* 2014; 17:E663-E670.

12. Whittle K. ICD-10 aftershocks: 5 ways for hospital CEOs to prepare for the inevitable. *Becker's Hospital Review,* August 24, 2015.

13. Terry K. EHRs' broken promise. What must be done to win back your trust. *Medical Economics,* May 25, 2015.

14. Bendiz J. MOC doctors strike back. *Medical Economics,* May 10, 2015.

15. Laszewski R. Health insurer merger mania – muscle-bound competitors and a new cold war in health car. *Forbes,* July 25, 2015.

16. Hirsch JA, Manchikanti L. The sustainable growth rate: A 2014 update. *J NeuroIntervent Surg* 2014; 6:411-412.

17. Hirsch JA, Leslie-Mazwi TM, Patel AB, Rabinov JD, Gonzalez RG, Barr RM, Nicola GN, Klucznik RP, Prestigiacomo CJ, Manchikanti L. MACRA: Background, opportunities and challenges for the neurointerventional specialist. *J Neurointerv Surg* 2015 Jul 28. [Epub ahead of print]

18. Manchikanti L, Staats PS, Boswell MV, Hirsch JA. Analysis of the carrot and stick policy of repeal of the sustainable growth rate formula: The good, the bad, and the ugly. *Pain Physician* 2015; 18:E273-E292.

19. Sanger-Katz M. When hospitals buy doctors' offices, and patient fees soar. *The New York Times,* February 6, 2015.

20. Osby L, Hospitals buying more doctors' practices. *USA Today,* September 4, 2013.

21. Gottlieb S. Hospitals are going on a doctor buying binge, and it is likely to end bad. *Forbes,* March 15, 2013.

22. Baltic S. Monopolizing medicine: Why hospital consolidation may increase health care costs. *Medical Economics,* February 24, 2014.

23. Flanagan N. More physicians leave independent practices. *HealthcareDIVE,* August 11, 2015.

24. Ficery K, Kushner K. The (Independent) doctor will NOT see you now. *2015 Accenture Independent Physicians Survey.*

25. Keehan SP, Cuckler GA, Sisko AM, Madison AJ, Smith SD, Stone DA, Poisal JA, Wolfe CJ, Lizonitz JM. National health expenditure projections, 2014-24: Spending growth faster than recent trends. *Health Aff (Millwood)* 2015; 34:1407-1417.

26. Dickson V. Senate panel will push HHS to delay Stage 3 MU rules. *Modern Healthcare,* July 23, 2015.

27. Jayanthi A. 8 epic EHR implementations with the biggest price tags in 2015. *Becker's Health IT & CIO Review,* July 1, 2015.
/www.beckershospitalreview.com/healthcare-information-technology/8-epic-ehr-implementations-with-the-biggest-price-tags-in-2015.html

28. Government Health IT Staff. GAO calls for urgent action on government IT projects. *Government Health IT,* June 15, 2015.
www.govhealthit.com/news/gao-calls-urgent-action-government-it-projects

29. World Health Organization. (ICD-10-CM) International Statistical Classification of Diseases-10-Clinical Modification.

30. Hirsch JA, Manchikanti L. Response to ready or not! Here comes ICD-10. *J Neurointerv Surg* 2013; 5:621.

31. Manchikanti L, Falco FJE, Kaye AD, Hirsch JA. The disastrous but preventable consequences of ICD-10. *Pain Physician* 2014; 17:E111-E118.

32. Hirsch JA, Leslie-Mazwi TM, Nicola GN, Oklu R, Schoppe KA, Silva III E, Manchikanti L. The ICD-10 system: A gift that keeps on taking. *J Neurointerv Surg* 2015; 7:619-622.

33. Pittman D. ICD-10 follies: Bug bites. *MedPage Today,* March 26, 2014.
www.medpagetoday.com/PracticeManagement/InformationTechnology/44945

34. Rubeinstein J. ICD-10: Are you ready? *Curr Urol Rep* 2014; 15:449.

35. Arrigo MF. Could ICD-10 have as big a financial impact as the mortgage crisis? Yes. Here's why. *Government Health IT,* October 17, 2011.
www.govhealthit.com/news/could-icd-10-have-big-financial-impact-mortgage-crisis

36. Butler R. ICD-10: One small step for health care – politics can take a hike. *3M Health Information Systems,* June 8, 2015.
https://3mhealthinformation.wordpress.com/2015/06/08/icd-10-one-small-step-for-health-care-politics-can-take-a-hike/

37. Nicoletti B. The ICD-10 emperor has no clothes. *Kevin MD.com,* April 21, 2014.
www.kevinmd.com/blog/2014/04/icd10-emperor-clothes.html

38. Kreimer S. The ICD-10 transition. Avoiding revenue disruptions. *Medical Economics,* May 25, 2015.

39. Moffit RE. Delay the ICD-10 coding system. *The Heritage Foundation,* March 31, 2014.
www.heritage.org/research/reports/2014/03/delay-the-icd-10-coding-system

40. Grimsley J, O'Shea J. The new disease classification (ICD-10): Doctors and patients will pay. *The Heritage Foundation,* May 18, 2015.
www.heritage.org/research/reports/2015/05/the-new-disease-classi-

fication-icd-10-doctors-and-patients-will-pay

41. Sullivan T. Q&A: How meaningful use is clashing with ICD-10. *Government Health IT*, September 12, 2011. www.govhealthit.com/news/qa-how-meaningful-use-clashing-icd-10

42. Supreme Court of the United States. Michigan et al v Environmental Protec-

tion Agency et al. June 29, 2015.

43. de Vogue A. Supreme court: EPA unreasonably interpreted the Clean Air Act. *CNN Politics*, June 29, 2015.

44. Manchikanti L, Pampati V, Falco FJE, Hirsch JA. An updated assessment of utilization of interventional pain management techniques in the Medicare

population: 2000 – 2013. *Pain Physician* 2015; 18:E115-E127.

45. Manchikanti L, Helm II S, Singh V, Hirsch JA. Accountable interventional pain management: A collaboration among practitioners, patients, payers, and government. *Pain Physician* 2013; 16:E635-E670.