* + - * 1. – ICD-9/ICD-10 Codes used for Patient Identification Title

ICD - 10 CODES

M41.25 Other idiopathic scoliosis, thoracolumbar region

M41.26 Other idiopathic scoliosis, lumbar region

M41.27 Other idiopathic scoliosis, lumbosacral region

M41.35 Thoracogenic scoliosis, thoracolumbar region

M41.45 Neuromuscular scoliosis, thoracolumbar region

M41.46 Neuromuscular scoliosis, lumbar region

M41.47 Neuromuscular scoliosis, lumbosacral region

M41.55 Other secondary scoliosis, thoracolumbar region

M41.56 Other secondary scoliosis, lumbar region

M41.57 Other secondary scoliosis, lumbosacral region

M41.85 Other forms of scoliosis, thoracolumbar region

M41.86 Other forms of scoliosis, lumbar region

M41.87 Other forms of scoliosis, lumbosacral region

M42.05 Juvenile osteochondrosis of spine, thoracolumbar region

M42.06 Juvenile osteochondrosis of spine, lumbar region

M42.07 Juvenile osteochondrosis of spine, lumbosacral region

M42.09 Juvenile osteochondrosis of spine, multiple sites in spine

M42.15 Adult osteochondrosis of spine, thoracolumbar region

M42.16 Adult osteochondrosis of spine, lumbar region

M42.17 Adult osteochondrosis of spine, lumbosacral region

M42.19 Adult osteochondrosis of spine, multiple sites in spine

M43.05 Spondylolysis, thoracolumbar region

M43.06 Spondylolysis, lumbar region

M43.07 Spondylolysis, lumbosacral region

M43.09 Spondylolysis, multiple sites in spine

M43.15 Spondylolisthesis, thoracolumbar region

M43.16 Spondylolisthesis, lumbar region

M43.17 Spondylolisthesis, lumbosacral region

M43.19 Spondylolisthesis, multiple sites in spine

M43.25 Fusion of spine, thoracolumbar region

M43.26 Fusion of spine, lumbar region

M43.27 Fusion of spine, lumbosacral region

M43.5X5 Other recurrent vertebral dislocation, thoracolumbar region

M43.5X6 Other recurrent vertebral dislocation, lumbar region

M43.5X7 Other recurrent vertebral dislocation, lumbosacral region

M43.8X5 Other specified deforming dorsopathies, thoracolumbar region

M43.8X6 Other specified deforming dorsopathies, lumbar region

M43.8X7 Other specified deforming dorsopathies, lumbosacral region

M46.05 Spinal enthesopathy, thoracolumbar region

M46.06 Spinal enthesopathy, lumbar region

M46.07 Spinal enthesopathy, lumbosacral region

M46.09 Spinal enthesopathy, multiple sites in spine

M46.25 Osteomyelitis of vertebra, thoracolumbar region

M46.26 Osteomyelitis of vertebra, lumbar region

M46.27 Osteomyelitis of vertebra, lumbosacral region

M46.35 Infection of intvrt disc (pyogenic), thoracolumbar region

M46.36 Infection of intervertebral disc (pyogenic), lumbar region

M46.37 Infection of intvrt disc (pyogenic), lumbosacral region

M46.39 Infection of intvrt disc (pyogenic), multiple sites in spine

M46.45 Discitis, unspecified, thoracolumbar region

M46.46 Discitis, unspecified, lumbar region

M46.47 Discitis, unspecified, lumbosacral region

M46.49 Discitis, unspecified, multiple sites in spine

M46.55 Other infective spondylopathies, thoracolumbar region

M46.56 Other infective spondylopathies, lumbar region

M46.57 Other infective spondylopathies, lumbosacral region

M46.59 Other infective spondylopathies, multiple sites in spine

M46.85 Oth inflammatory spondylopathies, thoracolumbar region

M46.86 Other specified inflammatory spondylopathies, lumbar region

M46.87 Oth inflammatory spondylopathies, lumbosacral region

M46.89 Oth inflammatory spondylopathies, multiple sites in spine

M46.95 Unspecified inflammatory spondylopathy, thoracolumbar region

M46.96 Unspecified inflammatory spondylopathy, lumbar region

M46.97 Unspecified inflammatory spondylopathy, lumbosacral region

M46.99 Unsp inflammatory spondylopathy, multiple sites in spine

M47.15 Other spondylosis with myelopathy, thoracolumbar region

M47.16 Other spondylosis with myelopathy, lumbar region

M47.17 Other spondylosis with myelopathy, lumbosacral region

M47.25 Other spondylosis with radiculopathy, thoracolumbar region

M47.26 Other spondylosis with radiculopathy, lumbar region

M47.27 Other spondylosis with radiculopathy, lumbosacral region

M47.815 Spondyls w/o myelopathy or radiculopathy, thoracolum region

M47.816 Spondylosis w/o myelopathy or radiculopathy, lumbar region

M47.817 Spondyls w/o myelopathy or radiculopathy, lumbosacr region

M47.895 Other spondylosis, thoracolumbar region

M47.896 Other spondylosis, lumbar region

M47.897 Other spondylosis, lumbosacral region

M48.05 Spinal stenosis, thoracolumbar region

M48.06 Spinal stenosis, lumbar region

M48.07 Spinal stenosis, lumbosacral region

M48.15 Ankylosing hyperostosis [Forestier], thoracolumbar region

M48.16 Ankylosing hyperostosis [Forestier], lumbar region

M48.17 Ankylosing hyperostosis [Forestier], lumbosacral region

M48.19 Ankylosing hyperostosis [Forestier], multiple sites in spine

M48.25 Kissing spine, thoracolumbar region

M48.26 Kissing spine, lumbar region

M48.27 Kissing spine, lumbosacral region

M48.35 Traumatic spondylopathy, thoracolumbar region

M48.36 Traumatic spondylopathy, lumbar region

M48.37 Traumatic spondylopathy, lumbosacral region

M48.8X5 Other specified spondylopathies, thoracolumbar region

M48.8X6 Other specified spondylopathies, lumbar region

M48.8X7 Other specified spondylopathies, lumbosacral region

M51 Thoracic, thoracolum, and lumbosacral intvrt disc disorders

M51.0 Thoracic, thrclm and lumbosacr intvrt disc disord w myelpath

M51.05 Intvrt disc disorders w myelopathy, thoracolumbar region

M51.06 Intervertebral disc disorders with myelopathy, lumbar region

M51.07 Intvrt disc disorders w myelopathy, lumbosacral region

M51.1 Thor, thrclm & lumbosacr intvrt disc disord w radiculopathy

M51.15 Intvrt disc disorders w radiculopathy, thoracolumbar region

M51.16 Intervertebral disc disorders w radiculopathy, lumbar region

M51.17 Intvrt disc disorders w radiculopathy, lumbosacral region

M51.2 Oth thoracic, thrclm and lumbosacr intvrt disc displacmnt

M51.25 Other intervertebral disc displacement, thoracolumbar region

M51.26 Other intervertebral disc displacement, lumbar region

M51.27 Other intervertebral disc displacement, lumbosacral region

M51.3 Oth thoracic, thrclm and lumbosacr intvrt disc degeneration

M51.35 Other intervertebral disc degeneration, thoracolumbar region

M51.36 Other intervertebral disc degeneration, lumbar region

M51.37 Other intervertebral disc degeneration, lumbosacral region

M51.45 Schmorl's nodes, thoracolumbar region

M51.46 Schmorl's nodes, lumbar region

M51.47 Schmorl's nodes, lumbosacral region

M51.8 Oth thoracic, thoracolum and lumbosacr intvrt disc disorders

M51.85 Other intervertebral disc disorders, thoracolumbar region

M51.86 Other intervertebral disc disorders, lumbar region

M51.87 Other intervertebral disc disorders, lumbosacral region

M51.9 Unsp thoracic, thoracolum and lumbosacr intvrt disc disorder

M53 Other and unspecified dorsopathies, not elsewhere classified

M53.2X5 Spinal instabilities, thoracolumbar region

M53.2X6 Spinal instabilities, lumbar region

M53.2X7 Spinal instabilities, lumbosacral region

M53.3 Sacrococcygeal disorders, not elsewhere classified

M53.85 Other specified dorsopathies, thoracolumbar region

M53.86 Other specified dorsopathies, lumbar region

M53.87 Other specified dorsopathies, lumbosacral region

M54.05 Panniculitis affecting regions of neck/bk, thoracolum region

M54.06 Panniculitis affecting regions of neck/bk, lumbar region

M54.07 Panniculitis affecting regions of neck/bk, lumbosacr region

M54.09 Panniculitis aff regions, neck/bk, multiple sites in spine

M54.15 Radiculopathy, thoracolumbar region

M54.16 Radiculopathy, lumbar region

M54.17 Radiculopathy, lumbosacral region

M54.31 Sciatica, right side

M54.32 Sciatica, left side

M54.41 Lumbago with sciatica, right side

M54.42 Lumbago with sciatica, left side

ICD - 9 CODES

721 Spondylosis and allied disorders

721.3 Lumbosacral spondylosis without myelopathy

721.4 Thoracic or lumbar spondylosis with myelopathy

721.42 Spondylosis with myelopathy, lumbar region

721.5 Kissing spine

721.6 Ankylosing vertebral hyperostosis

721.7 Traumatic spondylopathy

721.8 Other allied disorders of spine

721.9 Spondylosis of unspecified site

721.90 Spondylosis of unspecified site without mention of myelopathy

721.91 Spondylosis of unspecified site with myelopathy

722 Intervertebral disc disorders

722.1 Displacement of thoracic or lumbar disc without myelopathy

722.10 Displacement of lumbar disc without myelopathy

722.2 Displacement of disc, site unspecified, without myelopathy

722.3 Schmorl's nodes

722.30 Schmorl's nodes, unspecified region

722.32 Schmorl's nodes, lumbar region

722.39 Schmorl's nodes, other spinal region

722.5 Degeneration of thoracic or lumbar intervertebral disc

722.51 Degeneration of thoracic or thoracolumbar intervertebral disc

722.52 Degeneration of lumbar or lumbosacral intervertebral disc

722.6 Degeneration of intervertebral disc, site unspecified

722.7 Intervertebral disc disorder with myelopathy

722.70 Intervertebral disc disorder with myelopathy, unspecified region

722.73 Intervertebral lumbar disc disorder with myelopathy, lumbar region

722.8 Postlaminectomy syndrome

722.80 Postlaminectomy syndrome, unspecified region

722.83 Postlaminectomy syndrome, lumbar region

722.9 Other and unspecified disc disorder

722.90 Other and unspecified disc disorder of unspecified region

722.93 Other and unspecified disc disorder of lumbar region

724 Other and unspecified disorders of back

724.0 Spinal stenosis, other than cervical

724.00 Spinal stenosis, unspecified region other than cervical

724.02 Spinal stenosis of lumbar region, without neurogenic claudication

724.03 Spinal stenosis of lumbar region, with neurogenic claudication

724.09 Spinal stenosis, other region other than cervical

724.2 Lumbago

724.3 Sciatica

724.4 Thoracic or lumbosacral neuritis or radiculitis, unspecified

724.5 Unspecified backache

724.6 Disorders of sacrum

724.8 Other symptoms referable to back

724.9 Other unspecified back disorder

729.2 Unspecified neuralgia, neuritis, and radiculitis

738.4 Acquired spondylolisthesis

738.5 Other acquired deformity of back or spine

738.6 Acquired deformity of pelvis

739 Nonallopathic lesions, not elsewhere classified

739.3 Nonallopathic lesion of lumbar region, not elsewhere classified

739.4 Nonallopathic lesion of sacral region, not elsewhere classified

739.5 Nonallopathic lesion of pelvic region, not elsewhere classified

756.11 Congenital spondylolysis, lumbosacral region

756.12 Congenital spondylolisthesis

846 Sprains and strains of sacroiliac region

846.0 Sprain and strain of lumbosacral (joint) (ligament)

846.1 Sprain and strain of sacroiliac (ligament)

846.2 Sprain and strain of sacrospinatus (ligament)

846.3 Sprain and strain of sacrotuberous (ligament)

846.8 Other specified sites of sacroiliac region sprain and strain

846.9 Unspecified site of sacroiliac region sprain and strain

847 Sprains and strains of other and unspecified parts of back

847.2 Lumbar sprain and strain

847.3 Sprain and strain of sacrum

847.9 Sprain and strain of unspecified site of back

* + - * 1. – ICD-9/10 Codes for exclusion

592.0 Kidney Stones

N20.0 Calculus of Kidney

594.0 Bladder Stones

N21.0 Calculus of Bladder

574.2 Gall Bladder Stones

K80.20 Calculus of Gallbladder

599.0 Urinary Tract infection

N39.0 Urinary Tract infection

S32.x Fracture of the Lumbar Spine, Sacrum, Pelvis

805 Fracture of vertebral column without mention of spinal cord injury

808 Fracture of pelvis

809 Ill-defined fractures of bones of trunk

733.13 Pathologic fracture of vertebra

M48.50XA Collapsed vertebra, not elsewhere classified, site unspecified, initial encounter for fracture

M80.08XA Age-related osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture

M84.48XA Pathological fracture, other site, initial encounter for fracture

M84.68XA Pathological fracture in other disease, other site, initial encounter for fracture

733.98 Stress fracture of the pelvis

M84.350A Stress fracture, pelvis, initial encounter for fracture

730.2 Unspecified osteomyelitis, site unspecified

M.86.9 Osteomyelitis

720.0 Ankylosing spondylitis

M45.9 Ankylosing spondylitis of unspecified sites in spine

S34.3XXA Injury of cauda equina, initial encounter

952.4 Cauda equina spinal cord injury without evidence of spinal bone injury

140 – 209 Malignant Neoplasms

C00 – C96 Malignant Neoplasms

O00 – O9A Pregnancy, childbirth, and the puerperium

* + - * 1. – “Other” First Contact Providers

Acupuncture

Ambulatory surgery

Anesthesiology

Cardiology

Critical care medicine

Durable medical equipment & ox

Emergency medicine aca

Gastroenterology

Hematology/oncology

Home health

Hospital

Infectious diseases

Lab

Oncology

Ophthalmology

Palliative medicine

Pathology

Pediatric critical care medici

Pediatrics

Psychiatry

Psychology

Radiology

Radiology-mri

Rural clinic reimbursement

Skilled nursing facility-adult

Specialty products/services-bo

Surgery (critical care)

Transportation services

Unknown

Urology

* + - * 1. – SPMI ICD-9/10 codes

ICD-9-CM Group codes:

295 Schizophrenic Disorders

296 Episodic Mood Disorders

ICD-9-CM codes:

298.9 Unspecific Psychosis

301.83 Borderline Personality Disorder

ICD-10-CM Group codes:

F20 Schizophrenia

F25 Schizoaffective Disorders

ICD-10-CM codes:

F29 Unspecified psychosis not due to a substance or known physiological condition

F30.10 Manic Episode Without Psychotic Symptoms Unspecified

F30.11 Manic Episode Without Psychotic Symptoms Mild

F30.12 Manic Episode Without Psychotic Symptoms Moderate

F30.13 Manic Episode, Severe, Without Psychotic Symptoms

F30.2 Manic Episode, Severe, With Psychotic Symptoms

F30.3 Manic Episode In Partial Remission

F30.4 Manic Episode In Full Remission

F30.8 Other Manic Episode

F30.9 Manic Episode, Unspecified

F31.0 Bipolar disorder, current episode hypomanic

F31.10 Bipolar disorder, current episode manic without psychotic features unspecified

F31.11 Bipolar disorder, current episode manic without psychotic features mild

F31.12 Bipolar disorder, current episode manic without psychotic features moderate

F31.13 Bipolar disorder, current episode manic without psychotic features severe

F31.2 Bipolar disorder, current episode manic severe with psychotic features

F31.30 Bipolar disorder, current episode depressed, unspecified

F31.31 Bipolar disorder, current episode depressed, mild

F31.32 Bipolar disorder, current episode depressed, moderate

F31.4 Bipolar disorder, current episode depressed, severe, without psychotic features

F31.5 Bipolar disorder, current episode depressed, severe, with psychotic features

F31.60 Bipolar disorder, current episode mixed unspecified

F31.61 Bipolar disorder, current episode mixed mild

F31.62 Bipolar disorder, current episode mixed moderate

F31.63 Bipolar disorder, current episode mixed, severe, without psychotic features

F31.64 Bipolar disorder, current episode mixed, severe, with psychotic features

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

F31.73 Bipolar disorder, in partial remission, most recent episode manic

F31.74 Bipolar disorder, in full remission, most recent episode manic

F31.75 Bipolar disorder, in partial remission, most recent episode depressed

F31.76 Bipolar disorder, in full remission, most recent episode depressed

F31.77 Bipolar disorder, in partial remission, most recent episode mixed

F31.78 Bipolar disorder, in full remission, most recent episode mixed F31.70

F31.81 Bipolar II disorder

F31.89 Other bipolar disorder F31.9

F32.0 Major depressive disorder, single episode, mild

F32.1 Major depressive disorder, single episode, moderate

F32.2 Major depressive disorder, single episode, severe without psychotic features

F32.3 Major depressive disorder, single episode, severe with psychotic features

F32.4 Major depressive disorder, single episode, in partial remission

F32.5 Major depressive disorder, single episode, in full remission

F32.89 Other Specified Depressive Episodes

F32.9 Major depressive disorder, single episode, unspecified

F33.0 Major depressive disorder, recurrent, mild

F33.1 Major depressive disorder, recurrent, moderate

F33.2 Major depressive disorder, recurrent severe without psychotic features

F33.3 Major depressive disorder, recurrent, severe with psychotic symptoms

F33.4 Major depressive disorder, recurrent, in remission

F33.40 Major depressive disorder, recurrent, unspecified

F33.41 Major depressive disorder, recurrent, in partial remission

F33.42 Major depressive disorder, recurrent, in full remission

F33.8 Other recurrent depressive disorders

F33.9 Major depressive disorder, recurrent, unspecified F34.81

F34.89 Other specified persistent mood disorders

F34.9 Persistent mood [affective] disorder, unspecifiedF39

F60.3 Borderline Personality Disorder

* + - * 1. – Outcomes Codes

Surgery – Drg Codes

304 Dorsal & Lumbar Fusion Proc Except For Curvature Of Back

321 Cervical Spinal Fusion & Other Back/Neck Proc Exc Disc Excis/ Decomp

453 Combined Anterior/Posterior Spinal Fusion With Mcc

454 Combined Anterior/Posterior Spinal Fusion With Cc

455 Combined Anterior/Posterior Spinal Fusion Without Cc/Mcc

456 Spinal Fusion Except Cervical With Spinal Curvature Or Malignancy Or Infection Or Extensive Fusions With Mcc

457 Spinal Fusion Except Cervical With Spinal Curvature Or Malignancy Or Infection Or Extensive Fusions With Cc

458 Spinal Fusion Except Cervical With Spinal Curvature Or Malignancy Or Infection Or Extensive Fusions Without Cc/Mcc

459 Spinal Fusion Except Cervical With Mcc

460 Spinal Fusion Except Cervical Without Mcc

490 Back & Neck Procedure Except Spinal Fusion With Complication Or Comorbidity (Cc)/Major Complication Or Comorbidity (Mcc) Or Disc Devices/Neurostimulators

491 Back & Neck Procedure Except Spinal Fusion Without Complication Or Comorbidity (Cc)/Major Complication Or Comorbidity (Mcc)

496 Local Excision And Removal Of Internal Fixation Devices Except Hip And Femur With Complication Or Comorbidity (Cc)

497 Local Excision And Removal Internal Fixation Devices Except Hip And Femur Without Complication Or Comorbidity (Cc)/Major Complication Or Comorbidity (Mcc)

498 Local Excision And Removal Internal Fixation Devices Of Hip And Femur With Complication Or Comorbidity (Cc)/Major Complication Or Comorbidity (Mcc)

499 Local Excision And Removal Internal Fixation Devices Of Hip And Femur Without Complication Or Comorbidity (Cc)/Major Complication Or Comorbidity (Mcc)

500 Soft Tissue Procedures With Major Complication Or Comorbidity (Mcc)

551 Medical Back Problems With Major Complication Or Comorbidity (Mcc)

552 Medical Back Problems Without Major Complication Or Comorbidity (Mcc)

Injections – CPT-4 codes

C9209 Injection, laronidase, per 2.9 mg

G0260 Injection procedure for sacroiliac joint; provision of anesthetic, steroid and/or other therapeutic agent, with or without arthrography

J0131 Acetaminophen injection

J1020 Injection, methylprednisolone acetate, 20 mg

J1030 Injection, methylprednisolone acetate, 40 mg

J1040 Injection, methylprednisolone acetate, 80 mg

J1100 Injection, dihydroergotamine mesylate, per 1 mg

J1170 Injection, dihydroergotamine mesylate, per 1 mg

J1885 Injection, ketorolac tromethamine, per 15 mg

J2001 Injection, lidocaine hcl for intravenous infusion, 10 mg

J2175 Injection, meperidine hydrochloride, per 100 mg

J2270 Injection, morphine sulfate, up to 10 mg

J2274 Injection, morphine sulfate, preservative-free for epidural or intrathecal use, 10 mg

J2400 Injection, chloroprocaine hydrochloride, per 30 ml

J2920 Injection, methylprednisolone sodium succinate, up to 40 mg

J2930 Injection, methylprednisolone sodium succinate, up to 125 mg

X0620 Injection Nerve Block Procedures

01991 Under Anesthesia for Other Procedures

01992 Under Anesthesia for Other Procedures

20526 Under General Introduction or Removal Procedures on the Musculoskeletal System

20550 Under General Introduction or Removal Procedures on the Musculoskeletal System

20551 Under General Introduction or Removal Procedures on the Musculoskeletal System

20552 Under General Introduction or Removal Procedures on the Musculoskeletal System

20553 Under General Introduction or Removal Procedures on the Musculoskeletal System

27096 Under Introduction or Removal Procedures on the Pelvis and Hip Joint

62273 Under Injection, Drainage, or Aspiration Procedures on the Spine and Spinal Cord

62282 Under Injection, Drainage, or Aspiration Procedures on the Spine and Spinal Cord

62310 Epidural Injection

62311 Epidural Injection

62319 Epidural Injection

62322 Epidural Injection

62323 Epidural Injection

62326 Under Injection, Drainage, or Aspiration Procedures on the Spine and Spinal Cord

62327 Under Injection, Drainage, or Aspiration Procedures on the Spine and Spinal Cord

64445 Under Introduction/Injection of Anesthetic Agent (Nerve Block), Diagnostic or Therapeutic Procedures on the Somatic Nerves

64447 Under Introduction/Injection of Anesthetic Agent (Nerve Block), Diagnostic or Therapeutic Procedures on the Somatic Nerves

64449 Under Introduction/Injection of Anesthetic Agent (Nerve Block), Diagnostic or Therapeutic Procedures on the Somatic Nerves

64475 Facet Joint Injection

64476 Facet Joint Injection

64483 Under Introduction/Injection of Anesthetic Agent (Nerve Block), Diagnostic or Therapeutic Procedures on the Somatic Nerves

64484 Under Introduction/Injection of Anesthetic Agent (Nerve Block), Diagnostic or Therapeutic Procedures on the Somatic Nerves

64493 Under Introduction/Injection of Anesthetic Agent (Nerve Block), Diagnostic or Therapeutic Procedures on the Paravertebral Spinal Nerves and Branches

64494 Under Introduction/Injection of Anesthetic Agent (Nerve Block), Diagnostic or Therapeutic Procedures on the Paravertebral Spinal Nerves and Branches

64495 Under Introduction/Injection of Anesthetic Agent (Nerve Block), Diagnostic or Therapeutic Procedures on the Paravertebral Spinal Nerves and Branches

* + - * 1. – Kaplan Meier Curves



Figure 2.8.2 Probability of Low Cost Imaging

Figure 2.8.3 Probability of High Cost Imaging



Figure 2.8.4 Probability of Injections

Figure 2.8.5 Probability of Filled Opioid Prescription



Figure 2.8.6 Probability of Surgical Intervention

Figure 2.8.7 Probability of Specialist Referral



Figure 2.8.8 Probability of Unplanned Care Use

* + - * 1. – Variable Definitions

|  |  |  |
| --- | --- | --- |
| **Variable** | **Data Type** | **Description** |
| Demographics | Dichotomous | Age, gender, insurance coverage (Medicare Advantage, Medicaid Managed, Commercial) |
| Charlson Comorbidity Index (CCI) | Continuous | 22 condition report gathered from administrative and self-report data that calculates a one-year mortality prediction.  |
| CC- CHFCC - CADCC - COPDCC - DMCC - HTNCC - ANXCC - DEP | Dichotomous | Dichotomized elements of the CCI including congestive heart failure (CHF), peripheral vascular disease (PVD), chronic obstructive pulmonary disease (COPD), diabetes (DM), hypertension (HTN), anxiety (ANX), and depression (DEP) |
| BMI >30 | Dichotomous | BMI gathered from available clinical and administrative data.  |
| SPMI | Dichotomous | Individuals diagnosed with Schizophrenic Disorders, Episodic Mood Disorders, or Borderline Personality Disorders based on ICD-9/ICD-10 codes (Appendix D) over the previous 12-month period. This was included as a co-variate to control for members identified with SPMI who have “high behavioral health needs” and those identified without SPMI who are likely to have “low behavioral health needs.” |
| High Utilizers | Dichotomous | High utilizers were identified using internal predictive models that recognize members with increased service use. These models flag members with spending above a specific threshold or those with escalating utilization. Using a combination of claims data, pharmacy data and demographic data, the models predict whether utilization for flagged members will continue to escalate or remain above the spending threshold over the following 12 months. Members with end-stage renal disease, transplant and cancer are excluded from the models as they are expected to have high spending and utilization.  |
| Episode Length | Continuous | Date of the index visit for LBP to the date of the last claim with a LBP diagnosis code. An episode was considered “resolved” when a patient had 90 days without a claim for LBP. |
| Total Cost of Care | Continuous | Calculated as benefit allowed amount, including copays for all medical claims (including pharmacy claims), for 12 months following the index visit. LBP-related costs were defined as the medical and pharmacy claims associated ICD-9 / ICD-10  |
| LBP Spend | Continuous | Calculated as benefit allowed amounT, including copays for all medical claims (including pharmacy claims), for 12 months following the index visit. LBP-related costs were defined as the medical and pharmacy claims associated ICD-9 / ICD-10 LBP diagnosis codes over the same for the 12 months following the index visit. |
| X-Ray (Low Tech) | Time to Event | Use of an X-Ray. Identified by CPT code, date, and presence of LBP related code in the primary billing position. |
| MRI/CT (High Tech) | Time to Event | Use of an MRI / CT. Identified by CPT code, date, and presence of LBP related code in the primary billing position. |
| Injection | Time to Event | Use of an injection. Identified by CPT code, date, and presence of LBP related code in the primary billing position. |
| Opioid Script Filled | Time to Event | An opioid prescription related to LBP was operationalized using pharmacy claims. When a prescription is filled, the fill date and the date the prescription was written are loaded into the claim. When the date the prescription was written coincided with a visit claim date that had a LBP related diagnosis code, that prescription was associated with the current LBP episode. |
| Surgery | Time to Event | Progression to surgery. Identified by DRG code, date, and presence of LBP related code in the primary billing position. |
| Specialist Referral | Time to Event | Visit to orthopedics, neurosurgery, physical medicine and rehabilitation, and/or pain management. Identified by CPT code, date, and presence of LBP related code in the primary billing position. |
| Unplanned Care Use | Time to Event | Additional care delivered in the ED. Identified by CPT code, date, and presence of LBP related code in the primary billing position. |