# MEDICAL POLICY

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| **Medical Policy Title** | **Spine Procedures for Managed Medicaid (MMC), Health and Recovery Plan (HARP), Child Health Plus (CHP), and Essential Plan (EP) Members** |
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Our medical policies are guides to evaluate technologies or services for medical necessity. Criteria are established through the assessment of evidence based, peer-reviewed scientific literature, and national professional guidelines. Federal and state law(s), regulatory mandates and the member's subscriber contract language are considered first in the determination of a covered service.
(Link to Product Disclaimer)

## SECTION LINKS

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- Disc Arthroplasty (Replacement)
- Anterior Cervical Decompression with Fusion (ACDF) or without Fusion; **or** Posterior Cervical Decompression with or without Fusion
- Combined Anterior AND Posterior Cervical Decompression with or without Fusion

Lumbar-Sacral Spine Procedures:

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- Percutaneous Lumbar Discectomy / Disc Decompression
- Pediatric Scoliosis

## POLICY STATEMENT(S)

### Cervical Spine Procedures

#### Cervical Arthrodesis

I. Cervical arthrodesis is considered **medically appropriate** when **ALL** the following are met:

A. The individual has **any** of the following cervical spine conditions:
    1. Herniated disc;
    2. Segmental instability;
    3. Spondylosis; **or**
    4. Spinal canal stenosis;

B. Clinical presentation includes **any** of the following:
    1. Myelopathy (e.g., bowel or bladder dysfunction, gait disturbance, hyperreflexia, upper extremity weakness);
    2. Measurable neurologic impairment (e.g., motor weakness, sensory loss, abnormal reflexes); **or**
    3. Radiculopathy (e.g., numbness, paresthesias, or radiating upper extremity pain);

C. Conservative management meets **either** of the following:
    1. No conservative management is required for **any** of the following:
        a. Cervical myelopathy;
        b. Progressive neurologic deterioration;
        c. Severe spinal cord compression with significant neurologic findings;
        d. Segmental instability requiring surgical stabilization;
        e. Tumor, infection or instability resulting from trauma; **or**
    2. For all other indications, conservative management must include **both** the following:
        a. Physical therapy (PT) meets **all** the following:
            i. Participation for a minimum of 6 weeks during the previous 6 months;
            ii. Symptoms or functional impairments failed to improve;
            iii. Supervised by a licensed PT, chiropractor, or through tele-rehab PT; **and**
        b. Pain management includes **all** the following:
            i. Interventional pain management strategies (e.g., epidural steroid injections, facet injections, or selective nerve root blocks) have been considered, when clinically indicated;
            ii. Non-steroidal anti-inflammatory drugs (NSAIDs) for a minimum of 4 weeks, unless contraindicated; **and**
            iii. Non-pharmacologic pain management such as activity modification, rest periods, splinting, or therapeutic exercises;

D. Preoperative cervical spine imaging obtained within 6 months prior to surgery includes **any** of the following:
   1. Computed tomography (CT);
   2. CT Myelogram;
   3. Magnetic resonance imaging (MRI); **or**
   4. Radiographs (x-rays) as supplemental (e.g., flexion/extension).

II. Cervical arthrodesis is considered **not medically necessary** for **ANY** of the following contraindications:
   A. Uncontrolled diabetes with hemoglobin A1C (HbA1C) greater than 8%;
   B. Medical comorbidity with increased surgical risk (e.g., anemia, malnutrition, severe cardiovascular or pulmonary disease);
   C. Active infection, systemic or localized to the operative field;
   D. Allergy or hypersensitivity to implant materials; **or**
   E. Compromised bone integrity due to severe osteoporosis or metabolic bone disease that has not been adequately treated.

<u>Cervical Spine Corpectomy</u>

III. Anterior cervical spine corpectomy is considered **medically necessary** when **ALL** the following are met:
   A. Cervical fusion is performed as part of the procedure due to instability, given fusion criteria are met;
   B. A complete or partial cervical corpectomy is planned with removal of at least one-half of a vertebral body;
   C. Treatment is for **one (1) or more** of the following:
      1. Infection;
      2. Tumor (benign or malignant);
      3. Compression located at or posterior to the vertebral body level; **or**
      4. Trauma.

<u>Cervical Disc Arthroplasty (CDA)</u>

IV. Cervical disc arthroplasty (artificial disc replacement) is considered **medically appropriate** when **ALL** the following are met:
   A. Symptomatic cervical disc disease, evidenced by **both** of the following:
      1. Documented findings correlate with neural compression at the cord or nerve root level

(e.g., altered reflexes, dermatomal sensory loss, motor weakness); **and**

2. Radiculopathy and/or myelopathy attributable to degenerative disc disease at one (1) or two (2) levels between C3 and C7, with central, lateral recess, or foraminal compression (e.g., disc herniation, spondylotic osteophyte);

B. Conservative non-surgical management meets **either** of the following:

1. No conservative management is required when **any** of the following is documented:
    a. Objective neurological deterioration (e.g., increasing motor loss) across serial examinations;
    b. Myelopathy attributable to spinal cord compression (e.g., cord signal change on MRI);
    c. New-onset bowel or bladder dysfunction due to cervical spinal cord compression;
    d. Symptoms of nerve root or spinal cord compression are severe or rapidly progressive, requiring hospitalization or immediate surgery;
    e. Motor weakness is significant or rapidly progressing (e.g., motor grade ≤3/5, or interference with activities of daily living); **or**
2. For all other indications, conservative management must include **both** of the following:
    a. Physical therapy (PT) meets **all** the following:
        i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
        ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**
        iii. Symptoms or functional impairments failed to improve;
    b. Pain management includes **all** the following:
        i. Interventional pain management strategies (e.g., epidural steroid injections, facet injections, or selective nerve root blocks) have been considered, when clinically indicated;
        ii. Non-steroidal anti-inflammatory drugs (NSAIDs) for a minimum of 4 weeks, unless contraindicated; **and**
        iii. Non-pharmacologic pain management such as activity modification, rest periods, splinting, or therapeutic exercises;

C. Advanced imaging (MRI or CT) demonstrate neural compression at the cord or nerve root level(s) concordant with the clinical presentation;

D. Documentation confirms skeletal maturity;

E. The cervical disc replacement device is used in accordance with U.S. Food and Drug Administration (FDA)-approved labeling.

V. Cervical disc arthroplasty (artificial disc replacement) is considered **not medically necessary** for **ANY** of the following contraindications:

A. Uncontrolled diabetes with hemoglobin A1C (HbA1C) greater than 8%;

B. Medical comorbidity with increased surgical risk (e.g., anemia, malnutrition, severe cardiovascular or pulmonary disease);

C. Active malignancy involving the cervical spine or metastatic disease;

D. Allergy or sensitivity to materials used in the implant (e.g., titanium, polyethylene, cobalt, chromium, molybdenum);

E. Immune-mediated or inflammatory arthropathy, including the spondyloarthritis, (e.g., ankylosing spondylitis, psoriatic arthritis);

F. Metabolic bone disease (e.g., Paget disease, osteomalacia);

G. Marked cervical instability (e.g., greater than 3.5 millimeters translation and/or angular difference greater than 11 degrees);

H. Clinically significant cervical anatomical deformity (e.g., fixed kyphosis);

I. Facet arthropathy graded as moderate or worse at the involved level;

J. Active infection, local or systemic;

K. Ossification of the posterior longitudinal ligament (OPLL) at the level to be treated;

L. Osteoporosis or osteopenia;

M. Severe spondylosis (e.g., bridging osteophytes, greater than 50% loss of disc height, or segmental motion less than 2 degrees) and past surgical history at the requested level; **or**

N. Structural vertebral body deficiency or deformity resulting from prior trauma (e.g., malunion, nonunion, or fracture callus).

<u>Anterior Cervical Decompression with Fusion (ACDF) or without Fusion; or Posterior Cervical Decompression with or Without Fusion</u>

VI. Anterior cervical decompression with fusion (ACDF) or without fusion; or posterior cervical decompression with or without fusion (laminectomy, laminoforaminotomy, laminoplasty) is considered **medically appropriate** when **ALL** the following are met:

A. For fusion procedures only: evidence supports that the individual is nicotine-free by **either** of the following:

1. Individual is a never smoker; **or**

2. Cotinine testing (serum, urine, or saliva) results less than or equal to 10 ng/mL, confirming the individual has refrained from nicotine use (e.g., smoking, use of smokeless tobacco products, or nicotine replacement therapy) for a minimum of six (6) weeks prior to the planned surgery;

Exception: Urgent or emergent cervical fusion is not subject to nicotine abstinence requirements when surgical delay may compromise the individual's clinical status.

B. When documentation meets **one (1)** of the following:
   1. Cervical myelopathy or radiculopathy attributed to cervical deformity, herniated disc, segmental instability, or spondylosis when **both** of the following are documented:
      a. Conservative management meets **both** of the following:
         i. Physical therapy (PT) meets **all** the following:
            a) Participation for a minimum of 6 weeks during the previous 6 months;
            b) Symptoms or functional impairments failed to improve; **and**
            c) Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
         ii. Pain management includes **all** the following:
            a) Interventional pain management strategies (e.g., epidural steroid injections, facet injections, or selective nerve root blocks) have been considered, when clinically indicated;
            b) Non-steroidal anti-inflammatory drugs (NSAIDs) for a minimum of 4 weeks, unless contraindicated; **and**
            c) Non-pharmacologic pain management such as activity modification, rest periods, splinting, or therapeutic exercises;
      b. CT or MRI obtained within 6 months prior to surgery identifies neural compression at the cord or nerve root(s) levels concordant with the clinical presentation;

   **OR**

   2. Decompression, with or without fusion, may be performed as an initial surgical intervention without a trial of conservative management when **all** the following are documented:
      a. Symptoms of cervical myelopathy associated with spinal cord compression;
      b. Neurological impairments are progressing/worsening; **and**
      c. Objective clinical findings include **any** of the following:
         i. Clonus;
         ii. Hyperreflexia (exaggerated deep tendon reflexes);
         iii. Impaired walking or loss of coordination;
         iv. Motor weakness; **or**
         v. Positive Babinski or Hoffmann sign;

**OR**

3. Decompression with fusion may be performed as an initial surgical intervention without a trial of conservative management when **all** the following are documented:
    a. Significant neural compression (spinal cord or nerve root) from infection, trauma, or tumor, which may be demonstrated by spinal canal narrowing and/or clinical findings (e.g., loss of hand dexterity or gait/balance impairment); **and**
    b. X-rays identify fracture or segmental instability, defined by **either** of the following:
        i. C1-level subluxation with an atlantodental interval greater than 3 mm in an adult or 5 mm in a child; **or**
        ii. Sagittal plane measurement, demonstrating **either** of the following:
            a) Angulation greater than 11 degrees at a single motion segment; **or**
            b) Anterior translation greater than 3.5 mm accompanied by spinal cord dysfunction or radiculopathy;

**OR**

4. Decompression without fusion may be performed as an initial surgical intervention without a trial of conservative management when **all** the following are documented:
    a. Imaging (X-ray) confirms no segmental instability; **and**
    b. Significant neural compression (spinal cord or nerve root) from infection, trauma, or tumor, which may be demonstrated by spinal canal narrowing and/or clinical findings (e.g., loss of hand dexterity or gait/balance impairment).

VII. Cervical decompression or fusion is considered **not medically necessary** for **EITHER** of the following:
    A. Decompression performed without fusion, when the spinal deformity requires stabilization (fusion);
    B. The presence of **any** of the following contraindications:
        1. Uncontrolled diabetes with hemoglobin A1C (HbA1C) is greater than 8%;
        2. Medical comorbidity with increased surgical risk (e.g., anemia, malnutrition, severe cardiovascular or pulmonary disease);
        3. Clinically insignificant or minimally symptomatic disease that does not produce a meaningful functional limitation (e.g., incidental imaging findings);
        4. Neck pain in the absence of neurologic impairment, with no radiographic evidence of spinal cord or nerve root compression; **or**
        5. Imaging findings are not consistent with the individual's reported symptoms or objective clinical examination findings.

Combined Anterior AND Posterior Cervical Decompression, with or without Fusion

VIII. Anterior and posterior cervical spine decompression, with or without fusion, is considered **medically appropriate** when **ALL** the following are met:

A. Comorbid conditions are optimally managed;

B. Conservative management meets **both** of the following:

1. Physical therapy (PT) meets **all** the following:

a. Participation for a minimum of 6 weeks during the previous 6 months;

b. Symptoms or functional impairments failed to improve; **and**

c. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

2. Pain management includes **all** the following:

a. Interventional pain management strategies (e.g., epidural steroid injections, facet injections, or selective nerve root blocks) have been considered, when clinically indicated;

b. Non-steroidal anti-inflammatory drugs (NSAIDs) for a minimum of 4 weeks, unless contraindicated; **and**

c. Non-pharmacologic pain management such as activity modification, rest periods, splinting, or therapeutic exercises;

C. Imaging (CT, MRI, X-ray) reveals segmental instability or disc pathology;

D. Axial and non-radicular neck pain;

E. Anatomic source of pain (e.g., cervical facet [zygapophyseal] joint) has been identified and treated;

F. No more than two (2) levels are affected;

G. For fusion procedures only: evidence supporting that the individual is nicotine-free by **either** of the following:

1. Individual is a never smoker; **or**

2. Cotinine testing (serum, urine, or saliva) results less than or equal to 10 ng/mL, confirming the individual has refrained from nicotine use (e.g., smoking, use of smokeless tobacco products, or nicotine replacement therapy) for a minimum of six (6) weeks prior to the planned surgery;

Exception: Urgent or emergent cervical fusion is not subject to nicotine abstinence requirements when surgical delay may compromise the individual's clinical status.

IX. Cervical spine decompression or fusion is considered **not medically necessary** for the following:

A. Stand-alone decompression (without fusion) for spinal deformity (e.g. cervical kyphosis) requiring stabilization (fusion);

B. For **any** of the following contraindications:

1. Uncontrolled diabetes with hemoglobin A1C (HbA1C) is greater than 8%;
2. Medical comorbidity with increased surgical risk (e.g., anemia, malnutrition, severe cardiovascular or pulmonary disease);
3. Clinically insignificant or minimally symptomatic disease that does not produce a meaningful functional limitation (e.g., incidental imaging findings);
4. Neck pain in the absence of neurologic impairment, with no radiographic evidence of spinal cord or nerve root compression; **or**
5. Imaging findings are not consistent with the individual's reported symptoms or objective clinical examination findings.

Lumbar-Sacral Spine Procedures

Lumbar Arthrodesis

X. Lumbar arthrodesis is considered **medically appropriate** when **ALL** the following are met:

A. The individual has evidence of **any** of the following:

1. Symptomatic degenerative spondylolisthesis;
2. Neurogenic claudication or radiculopathy attributable to degenerative disease;
3. Recurrent lumbar disc herniation necessitating segmental stabilization;
4. Persistent, clinically significant axial low back pain accompanied by **either** of the following:
   a. Degenerative spondylolisthesis; **or**
   b. Neurogenic claudication
5. Segmental instability demonstrated on imaging (e.g., abnormal motion on flexion-extension views); **or**
6. Spinal deformity with associated symptoms (e.g., scoliosis);

B. Symptom burden includes **either** of the following:

1. Clinically significant pain; **or**
2. Functional impairment that interferes with activities of daily living;

C. Conservative management meets **either** of the following:

1. No requirement for conservative management for **any** of the following indications:
   a. Cauda equina syndrome;

b. Deteriorating or marked motor/sensory deficit (e.g., weakness, foot drop);
c. Instability or neurologic impairment secondary to spinal infection or tumor for which surgical intervention is indicated; **or**
d. Traumatic spinal instability;

**OR**

2. For all other indications, conservative management includes **both** of the following:
   a. Physical therapy (PT) meets **all** the following:
      i. Participation for a minimum of 6 weeks during the previous 6 months;
      ii. Symptoms or functional impairments failed to improve; **and**
      iii. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
   b. Pain management includes **all** the following:
      i. Interventional pain management strategies (e.g., epidural steroid injections, facet injections, or selective nerve root blocks) have been considered, when clinically indicated;
      ii. Non-steroidal anti-inflammatory drugs (NSAIDs) for a minimum of 4 weeks, unless contraindicated; **and**
      iii. Non-pharmacologic pain management such as activity modification, rest periods, splinting, or therapeutic exercises;

D. Preoperative lumbar spine imaging includes **both** of the following:
   1. Findings consistent with clinical presentation; **and**
   2. Obtained within 6 months prior to surgery using **any** of the following:
      a. CT;
      b. CT myelogram;
      c. MRI; **or**
      d. X-ray.

XI. Lumbar arthrodesis is considered **not medically necessary** for **ANY** of the following contraindications:
   A. Uncontrolled diabetes with hemoglobin A1C (HbA1C) is greater than 8%;
   B. Medical comorbidity with increased surgical risk (e.g., anemia, malnutrition, severe cardiovascular or pulmonary disease);
   C. Clinically insignificant or minimally symptomatic disease that does not produce a meaningful functional limitation (e.g., incidental imaging findings);

D. Active infection, systemic or localized to the operative field, except when the fusion is intended to treat the infection; **or**

E. Compromised bone integrity due to severe osteoporosis or metabolic bone disease that has not been adequately treated.

Lumbar Spine Decompression

XII. Lumbar decompression (facetectomy, foraminotomy, laminectomy, laminotomy) is considered **medically appropriate** when **ALL** the following are met:

A. Subjective symptoms include **either** of the following:

1. Significant level of pain on a daily basis; **or**
2. Significant functional impairment impacting activities of daily living (e.g., household tasks, prolonged standing, walking);

B. Preoperative lumbar spine imaging (e.g., CT, MRI) includes **both** of the following:

1. Obtained within 6 months prior to surgery; **and**
2. Stenosis (central canal, lateral recess, or foraminal) at the identified level(s) is consistent with clinical presentation and findings;

C. Documentation confirms **either** of the following clinical presentations:

1. Neurogenic claudication includes **all** the following:
   a. Symptoms involve the low back, buttocks, or legs, with **at least one (1)** of the following documented:
      i. cramping;
      ii. decreased strength,
      iii. heaviness;
      iv. numbness
      v. pain; **or**
      vi. paresthesia;
   b. Functional impairment related to limitations in ambulation or standing;
   c. Symptom relief from sitting or lumbar flexion; **and**
   d. Symptom exacerbation with standing or walking;

**OR**

2. Radiculopathy secondary to lumbar stenosis includes **all** the following symptoms:
   a. Pain radiating into the buttock or legs is ongoing;

b. A symptom pattern that follows the distribution of the involved nerve root; **and**

c. Documentation of **one (1) or more** of the following:

i. Sensory loss in a dermatomal pattern;

ii. Nerve root–specific muscle weakness;

iii. Reproduction of symptoms with the contralateral (crossed) straight leg raise;

iv. Positive femoral nerve stretch maneuver;

v. Positive straight leg raise (SLR) or comparable nerve tension sign; **or**

vi. Reflex abnormality (e.g., absent or diminished);

D. Conservative management meets **either** of the following:

1. No requirement for conservative management for **any** of the following indications:

a. Cauda equina syndrome;

b. Neurologic deterioration over time (e.g., declining functional capacity, new/worsening foot drop or motor strength);

c. Motor deterioration progressed over a short period of time;

d. Significant motor weakness of 3/5 or less on manual muscle testing; **or**

e. Significant neurologic compromise resulting from lumbar neural compression, supported by imaging findings consistent with the clinical presentation;

**OR**

2. For all other indications, conservative management includes **both** of the following:

a. Physical therapy (PT) meets **all** the following:

i. Participation for a minimum of 6 weeks during the previous 6 months;

ii. Symptoms or functional impairments failed to improve; **and**

iii. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

b. Pain management includes **all** the following:

i. Interventional pain management strategies (e.g., epidural steroid injections, facet injections, or selective nerve root blocks) have been considered, when clinically indicated;

ii. Non-steroidal anti-inflammatory drugs (NSAIDs) for a minimum of 4 weeks, unless contraindicated; **and**

iii. Non-pharmacologic pain management such as activity modification, rest periods, splinting, or therapeutic exercises.

XIII. Lumbar decompression (facetectomy, foraminotomy, laminectomy, laminotomy) is considered **not medically necessary** for **EITHER** of the following contraindications:

A. Uncontrolled diabetes with hemoglobin A1C (HbA1C) is greater than 8%;

B. Medical comorbidity with increased surgical risk (e.g., anemia, malnutrition, severe cardiovascular or pulmonary disease).

Lumbar Fusion: Single Level, with or without Decompression

XIV. Single level lumbar fusion, with or without decompression (laminectomy, laminotomy, facetectomy, foraminotomy) is considered **medically appropriate** when **EITHER** of the following are met:

A. For chronic axial low back pain attributed to degenerative disc disease and a condition requiring spinal stabilization when **all** the following are met:

1. Axial low back pain without primary symptoms of radiculopathy has persisted for a minimum of 6 months;
2. Conservative management includes **both** the following:
    a. Physical therapy (PT) meets **all** the following:
        i. Participation for a minimum of 6 weeks during the previous 6 months;
        ii. Symptoms or functional abilities failed to improve; **and**
        iii. Supervised by a licensed PT, chiropractor, or through tele-rehab PT; **and**
    b. Pain management includes **all** the following:
        i. Interventional pain management trial (e.g., epidural steroid injections, facet injections, or selective nerve root blocks), unless documentation supports rationale for why trial is not appropriate;
        ii. Non-steroidal anti-inflammatory drugs (NSAIDs) for a minimum of 4 weeks, unless contraindicated; **and**
        iii. Non-pharmacologic pain management such as activity modification, rest periods, splinting, or therapeutic exercises;
3. Preoperative imaging (e.g., CT, MRI, X-rays) obtained within 6 months prior to the procedure confirms a structural abnormality at the requested fusion level that concordant with reported symptoms, objective examination findings, and overall clinical picture;
4. Documented objective findings confirming a structural abnormality for which fusion is needed to restore segmental stability, evidenced by **any** of the following:
    a. Spondylolisthesis accompanied by instability on dynamic or side-by-side comparative imaging;

b. Abnormal segmental motion, defined as more than 3 mm of translational displacement between flexion and extension views on dynamic X-rays; **or**

c. Symptomatic, localized spinal deformity that requires operative stabilization;

5. Evidence supporting that the individual is nicotine-free by **either** of the following:

a. Individual is a never smoker; **or**

b. Cotinine testing (serum, urine, or saliva) results less than or equal to 10 ng/mL, confirming the individual has refrained from nicotine use (e.g., smoking, use of smokeless tobacco products, or nicotine replacement therapy) for a minimum of six (6) weeks prior to the planned surgery.

Exception: Urgent or emergent lumbar fusion is not subject to nicotine abstinence requirements when surgical delay may compromise the individual's clinical status.

**OR**

B. For lumbar fusion as first line treatment, without a trial of non-surgical conservative management, when **both** of the following are met:

1. **All** the following are met:

a. Documentation of **any** of the following conditions:

i. Cauda equina syndrome with bowel or bladder dysfunction accompanied by neurologic deficits;

ii. Acute, progressive and significant neurological impairment (e.g., motor weakness, reflex changes); **or**

iii. Spinal infection, tumor or malignancy;

b. Preoperative imaging obtained within 6 months prior to the procedure confirms a structural abnormality at the requested fusion level concordant with reported symptoms and objective examination findings; **and**

c. Evidence confirms that fusion is necessary to restore segmental stability; **and**

2. Evidence supporting that the individual is nicotine-free by **either** of the following:

a. Individual is a never smoker; **or**

b. Cotinine testing (serum, urine, or saliva) results less than or equal to 10 ng/mL, confirming the individual has refrained from nicotine use (e.g., smoking, use of smokeless tobacco products, or nicotine replacement therapy) for a minimum of six (6) weeks prior to the planned surgery.

Exception: Urgent or emergent lumbar fusion is not subject to nicotine abstinence requirements when surgical delay may compromise the individual's clinical status.

<u>Repeat Lumbar Fusion at the Same Level</u>

XV. Repeat lumbar fusion (arthrodesis) (with or without decompression) at the same level in adult patients is considered **medically necessary** for **EITHER** of the following indications:

A. For malposition or failure of implant/instrumentation or structural bone graft, when the following criteria are met:

1. Post-operative imaging shows evidence of malposition or failure of the implant/instrumentation or structural bone graft (e.g., migration, pedicle screw breakage, pedicle screw loosening, dislodged hooks, rod breakage, rod bending, rod loosening, loss of curve correction, decompensation, etc.);

**OR**

B. For symptomatic Pseudoarthrosis when **all** the following criteria are met:

1. Greater than 6 months since the prior lumbar fusion;
2. Subjective symptoms include significant level of pain on a daily basis defined as clinically significant functional impairment (e.g., inability to perform household chores, prolonged standing, etc.);
3. Post-operative physical exam findings are concordant with the individual's symptoms;
4. Less than clinically meaningful improvement with 6 weeks of non-surgical treatment with **both** of the following (unless contraindicated):
    a. Prescription strength analgesics, steroids, gabapentinoids or NSAIDs; **and**
    b. Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician;
5. Post-operative imaging (performed at no less than six (6) months after the lumbar fusion) shows pseudoarthrosis at the requested level(s);
6. Post-operative MRI/CT findings are concordant with the individual's symptoms;
7. Evidence supporting that the individual is nicotine-free by **either** of the following:
    a. Individual is a never smoker; **or**
    b. Cotinine testing (serum, urine, or saliva) results less than or equal to 10 ng/mL, confirming the individual has refrained from nicotine use (e.g., smoking, use of smokeless tobacco products, or nicotine replacement therapy) for a minimum of six (6) weeks prior to the planned surgery.

    Exception: Urgent or emergent lumbar fusion is not subject to nicotine abstinence requirements when surgical delay may compromise the individual's clinical status.

<u>Lumbar Spine Discectomy/Microdiscectomy</u>

XVI. A lumbar discectomy/microdiscectomy is considered **medically appropriate** when **either** of the following is met:

A. For urgent conditions, microdiscectomy is indicated as first-line treatment without a trial of conservative management when **either** of the following is documented:
   1. Cauda equina syndrome (e.g., saddle anesthesia, bowel or bladder dysfunction); **or**
   2. Motor impairment is severe (e.g., weakness ≤3/5) or worsening over a short period of time (e.g., across several examinations);

**OR**

B. For intervertebral disc herniation, when **all** the following are met:
   1. MRI confirms a disc herniation that is concordant with the clinical presentation;
   2. Functional impairment is attributable to radiculopathy;
   3. Conservative management meets **both** of the following:
      a. Physical therapy (PT) meets **all** the following:
         i. Participation for a minimum of 6 weeks during the previous 6 months;
         ii. Symptoms or functional limitations failed to improve; **and**
         iii. Supervised by a licensed PT, chiropractor, or through tele-rehab PT; **and**
      b. Pain management includes **all** the following:
         i. Interventional pain management strategies (e.g., epidural steroid injections, facet injections, or selective nerve root blocks) have been considered, when clinically indicated;
         ii. Non-steroidal anti-inflammatory drugs (NSAIDs) for a minimum of 4 weeks, unless contraindicated; **and**
         iii. Non-pharmacologic pain management such as activity modification, rest periods, splinting, or therapeutic exercises.

XVII. A lumbar discectomy/microdiscectomy is considered **not medically necessary** for **ANY** of the following contraindications:

A. Uncontrolled diabetes with hemoglobin A1C (HbA1C) is greater than 8%;

B. Medical comorbidity with increased surgical risk (e.g., anemia, malnutrition, severe cardiovascular or pulmonary disease);

<u>Lumbar Osteotomy</u>

XVIII. Lumbar spinal osteotomy is considered **medically appropriate** when **ALL** the following are met:

A. Spinal alignment abnormality includes **both** of the following:
   1. Documented for a minimum of 6 months; **and**

2. Standing X-rays confirm the presence **of any** of the following:
    a. Flatback deformity;
    b. Fixed kyphotic deformity;
    c. Fixed sagittal-plane deformity;
    d. Moderate-to-severe sagittal malalignment;
    e. Sagittal malalignment following prior fusion that causes functional impairment; **or**
    f. Symptomatic spinal deformity for which surgical correction is indicated;

B. Associated symptoms include **any** of the following:
1. Neurologic impairment confirmed by objective findings on physical examination;
2. Radicular symptoms that correspond with findings on diagnostic imaging;
3. Neurogenic claudication;
4. Chronic midline (axial) low back pain caused by the deformity;
5. Difficulty walking, including decreased tolerance;
6. Impaired ability to remain upright;
7. Impaired ability to maintain a horizontal gaze due to deformity; **or**
8. Meaningful loss of function affecting the performance of activities of daily living;

C. Preoperative imaging includes **all** the following:
1. Obtained within 3 to 6 months prior to surgery;
2. Advanced imaging of the lumbar spine (CT or MRI);
3. Standing X-rays document the presence of a spinal alignment abnormality; and
4. Correlation between imaging findings, clinical findings, and the planned corrective procedure;

D. Conservative management meets **either** of the following:
1. No conservative management is required for **any** of the following:
    a. Cauda equina syndrome;
    b. Bowel or bladder dysfunction caused by compression of neural structures;
    c. Neurologic deficit continues to worsen over time; **or**
    d. Neurologic decline occurring over a short interval;
2. For all other indications, conservative pain management includes **all** the following:
    a. Pharmacological treatment with **either** of the following, as clinically indicated:

i. Analgesics or anti-inflammatory medication (e.g., NSAIDs); **or**

ii. Corticosteroid injection(s);

b. Participation in **at least one (1)** of the following treatments:

i. Activity modification and/or avoidance of aggravating activities;

ii. Acupuncture;

iii. Biofeedback techniques;

iv. Cognitive behavioral therapy (CBT);

v. Transcutaneous electrical nerve stimulation (TENS);

c. Physical therapy (PT) meets **all** the following:

i. Participation for a minimum of 6 weeks during the previous 6 months;

ii. Symptoms or functional limitations failed to improve; **and**

iii. Supervised by a licensed PT, chiropractor, or through tele-rehab PT.

XIX. Lumbar spinal osteotomy is considered **not medically necessary** for **ANY** of the following contraindications:

A. Uncontrolled diabetes with hemoglobin A1C (HbA1C) is greater than 8%;

B. Medical comorbidity with increased surgical risk (e.g., anemia, malnutrition, severe cardiovascular or pulmonary disease);

C. Bleeding disorder that cannot be adequately corrected;

D. Compromised bone integrity, including severe osteoporosis.

E. Hypersensitivity to bone cement or osseointegration/augmentation materials; **or**

F. Unresolved infection, including infection in the bloodstream;

<u>Percutaneous Lumbar Disc Decompression / Discectomy</u>

XX. Percutaneous lumbar disc decompression or discectomy procedures are considered **investigational**, include but are not limited to:

A. Automated percutaneous lumbar discectomy (APLD) (e.g., Nucleotome);

B. Mechanical percutaneous discectomy (e.g., Dekompressor);

C. Percutaneous laser disc decompression (PLDD);

D. Nucleoplasty (also known as plasma disc decompression [PDD], radiofrequency coblation disc decompression, or plasma-mediated ablation; e.g., SpineWand);

E. Targeted disc decompression (TDD).

<u>Pediatric Scoliosis</u>

XXI. Surgical management of scoliosis in the pediatric population is considered **medically appropriate** when **ALL** of the following are met:

A. The clinical presentation meets **all** the following:

1. Physical examination findings include **any** of the following:
    a. Unequal shoulder or pelvic (iliac crest) heights;
    b. Trunk shift or lateral lean in posture;
    c. Paraspinal/rib prominence elicited on the Adams forward-bend maneuver;
    d. Asymmetric waist contour or hip alignment; **or**
    e. Clinically apparent curvature of the spine;
2. Diagnostic imaging obtained within the preceding 12 months confirms **any** of the following:
    a. Cobb measurement of 50 degrees or more in a child at or approaching the end of skeletal growth (maturity);
    b. Early-onset scoliosis exhibiting a curve exceeding 40 degrees with substantial remaining growth potential;
    c. Documented curve advancement to a Cobb measurement of 45 degrees or more despite a trial of non-operative conservative management;
    d. Worsening deformity producing truncal imbalance, loss of function, or a demonstrable likelihood of continued progression;
3. Preoperative imaging includes **all** the following:
    a. Obtained within the last 12 months of the planned procedure;
    b. Documentation of the measured Cobb angle;
    c. Imaging findings are concordant with the diagnosed deformity and planned surgical correction;
    d. X-rays including standing PA and lateral spine; **and**
    e. MRI has been obtained when **any** of the following are identified:
        i. Abnormal findings on neurologic examination;
        ii. Atypical curve features; **or**
        iii. Rapid curve progression;

B. Treatment includes **both** of the following:

1. Non-surgical conservative management includes **both** of the following:
    a. Ongoing use of brace or spinal orthosis until **either** of the following:

i. The individual reaches skeletal maturity prior to surgical consideration; **or**

ii. Until the curve advances beyond 45 degrees; **and**

b. Physical therapy (PT) meets **all** the following:

i. Participation for a minimum of 6 weeks during the previous 6 months;

ii. Symptoms or functional impairments failed to improve; **and**

iii. Supervised by a licensed PT, chiropractor, or through tele-rehab PT; **and**

2. Surgical management includes **any** of the following:

a. Posterior instrumented spinal fusion indicated for curves in the range of approximately 45 to 50 degrees or greater;

b. Vertebral body tethering (VBT) when **all** the following are present:

i. Cobb measurement between 35 and 65 degrees;

ii. Bracing has failed, is not tolerated, or is otherwise unsuitable; **and**

iii. Skeletal immaturity with meaningful growth remaining; **or**

c. In early-onset disease with a curve exceeding 40 degrees and substantial residual growth, a growth-preserving construct (traditional growing rods or magnetically controlled growing rods).

## RELATED POLICIES

Corporate Medical Policy

7.01.122 Interventional Pain Management for Managed Medicaid (MMC), Health and Recovery Plan (HARP), Child Health Plus (CHP), and Essential Plan (EP) Members

## POLICY GUIDELINE(S)

Not Applicable

## DESCRIPTION

The cervical and lumbar-sacral spine are common sites of degenerative, structural, and traumatic disease that can compress the spinal cord and nerve roots or destabilize the spinal column. When these conditions produce pain, neurologic impairment, or functional limitation that does not respond to appropriate non-surgical treatment, or when urgent neurologic compromise is present, surgical intervention may be used to relieve pressure on neural structures (decompression), stabilize abnormal motion (fusion/arthrodesis), replace a diseased disc (arthroplasty), or correct structural deformity (osteotomy or scoliosis correction).

Common Clinical Conditions

- Cauda equina syndrome (CES) is a surgical emergency caused by severe compression of the

bundle of nerve roots at the base of the spine, producing new bowel and/or bladder dysfunction, saddle anesthesia, and frequently bilateral lower-extremity pain, numbness, or weakness. CES requires urgent decompression and is exempt from conservative care and other elective requirements.

- Degenerative disc disease (DDD) is the age-related deterioration of an intervertebral disc, with loss of disc height, dehydration, bulging, or herniation. Although commonly associated with aging, surgical treatment is generally considered only when degeneration is associated with nerve compression, instability, or other clinically significant pathology that correlates with symptoms.
- A herniated disc is displacement of the inner disc material beyond its normal boundary, which may press on a nerve root or the spinal cord.
- Myelopathy is dysfunction of the spinal cord itself from compression. Signs include problems with balance or walking, loss of hand dexterity, overactive reflexes, and in severe cases bowel or bladder dysfunction. It is generally progressive and typically warrants more urgent evaluation and treatment than isolated radiculopathy.
- Pseudarthrosis (failed fusion) is the failure of a prior fusion to heal into solid bone, which can cause recurrent pain and instability and may warrant a repeat operation.
- Scoliosis is an abnormal lateral and rotational curvature of the vertebral column. Adolescent idiopathic scoliosis is the most common form of idiopathic scoliosis. Severe progressive thoracic deformities may be associated with cardiopulmonary compromise. Diagnosis is made clinically and radiographically.
    - The curve is measured by the Cobb angle, which is the angle formed between intersecting lines drawn perpendicular to the top of the vertebrae of the curve and the bottom vertebrae of the curve.
    - The Risser sign measures remaining spinal growth by progressive anterolateral to posteromedial ossification. Risser sign ranges from 0 (no ossification) to 5 (full bony fusion of the apophysis). Immature patients will have 0% to 25% ossification (Risser grade 0 or 1), while 100% ossification (Risser grade 5) indicates maturity with no spinal growth remaining. Children may progress from a Risser grade 1 to grade 5 over a brief (eg, 2-year) period.
- Radiculopathy refers to symptoms caused by compression or irritation of a single nerve root. Symptoms typically include pain, numbness, tingling, or weakness that follows the path of that nerve into the arm (cervical) or leg (lumbar).
- Segmental instability is abnormal, excessive movement between two (2) vertebrae that may be demonstrated by dynamic imaging studies (e.g., flexion-extension radiographs) and can cause pain or neural compromise.
- Spinal stenosis is narrowing of the spinal canal or the openings where nerves exit (foramina), most often from degeneration, that can compress neural structures.

- Spondylolisthesis is forward (or backward) slippage of one vertebra relative to the one below it, which may narrow the canal and destabilize the segment.
- Spondylosis is general degenerative "wear-and-tear" arthritis of the spine, including bone spurs (osteophytes) and joint degeneration that can narrow the spaces around the spinal cord and nerves.

Cervical Spine Procedures

- Cervical arthrodesis is the permanent joining of two or more vertebrae so they heal into a single bone, eliminating motion at the painful or unstable segment. It is used for instability, deformity, or to stabilize the spine after decompression or removal of disc or bone.
- Cervical corpectomy involves removal of all or part of a vertebral body and adjacent discs to decompress the spinal cord or nerve roots when compression is located behind the vertebral body itself, such as from tumor, infection, trauma, or extensive spondylosis. Because structural bone is removed, fusion and reconstruction are required.
- Cervical disc arthroplasty (CDA), also known as artificial/cervical disc replacement, is a motion-preserving alternative to ACDF for selected one- or two-level disc disease between C3 and C7. The diseased disc is removed and replaced with an FDA-approved artificial disc intended to decompress the nerves or spinal cord while maintaining cervical motion. Appropriate candidates require skeletal maturity and suitable anatomy, including adequate bone quality and the absence of significant deformity, instability, or facet arthropathy.
- Anterior cervical discectomy and fusion (ACDF) is the most established operation for symptomatic cervical disc disease. Through the front of the neck, the surgeon removes the diseased disc and any associated bone spurs to decompress the nerves or spinal cord, then fuses the segment to restore height, alignment, and stability.
- Posterior cervical decompression, with or without fusion, relieves pressure on the spinal cord or nerve roots through the back of the neck by removing bone or ligament. Techniques include laminectomy (removal of the lamina), laminoforaminotomy (enlargement of the nerve root exit), and laminoplasty (reshaping or hinging the lamina to expand the spinal canal while preserving motion). Fusion may be added when the segment is unstable or expected to become unstable.
- Combined anterior and posterior decompression and fusion uses both front and back surgical approaches and is generally reserved for complex disease, such as multilevel compression or deformity, when a single approach cannot adequately decompress or stabilize the spine.

Lumbar-Sacral Spine Procedures

- Lumbar arthrodesis permanently joins lumbar vertebrae to eliminate painful or unstable motion. Indications include degenerative spondylolisthesis, segmental instability, deformity, and recurrent disc herniation requiring stabilization. Fusion may be performed alone or combined with decompression through anterior, posterior, or lateral surgical approaches depending on the clinical situation.

- Single-level lumbar fusion, with or without decompression, treats a structurally confirmed abnormality at a single motion segment, such as spondylolisthesis associated with instability or abnormal segmental motion, or, in selected circumstances, carefully evaluated chronic axial low back pain associated with single-level degenerative pathology.
- Repeat (revision) lumbar fusion at the same level may be performed when a previous fusion has failed because of hardware failure, hardware malposition, or a symptomatic non-union (pseudarthrosis) confirmed on imaging.
- Lumbar decompression relieves pressure on the nerve roots or cauda equina in individuals with neurogenic claudication or radiculopathy caused by spinal stenosis. Techniques include laminectomy, laminotomy, foraminotomy, and facetectomy to enlarge the spinal canal or nerve root openings.
- Lumbar discectomy or microdiscectomy removes the herniated portion of a disc that is compressing a nerve root, typically for radiculopathy that has not improved with conservative management or, more urgently, for cauda equina syndrome or severe or progressive weakness. The term "microdiscectomy" refers to the use of magnification and smaller surgical exposures.
- Lumbar osteotomy involves surgical cutting and realignment of one or more vertebrae to correct a fixed spinal deformity, such as flatback deformity or fixed sagittal imbalance, that impairs standing, walking, or horizontal gaze. It is typically performed as part of a larger spinal reconstruction.
- Pediatric scoliosis surgery corrects spinal curvature in children and adolescents. Surgical options include posterior instrumented spinal fusion for larger curves, growth-preserving instrumentation such as traditional or magnetically controlled growing rods for early-onset scoliosis with substantial growth remaining, and vertebral body tethering in appropriately selected skeletally immature patients.
- Percutaneous lumbar disc decompression / discectomy are needle-based techniques that remove or shrink disc material through a small puncture under imaging guidance, including automated percutaneous lumbar discectomy (e.g., Nucleotome), mechanical percutaneous discectomy (e.g., Dekompressor), percutaneous laser disc decompression (PLDD), nucleoplasty/plasma (coblation) disc decompression, and targeted disc decompression.

<u>Cross-Cutting Concepts in the Criteria</u>

- Conservative (non-surgical) management for non-urgent conditions aims to relieve pain, improve or restore function, and allow an appropriate trial of non-operative treatment before surgical intervention is considered. Conservative therapy may include a documented trial of supervised physical therapy and pain management (e.g., medications, interventional injections, and non-pharmacologic measures). This requirement is waived for urgent or emergent presentations, such as cauda equina syndrome, progressive neurologic deficit, significant motor weakness, myelopathy with cord compression, or instability/compression related to trauma, tumor, or infection.

- Imaging concordance requires that advanced imaging (MRI, CT, or CT myelogram), supplemented by X-rays when needed, demonstrate a structural abnormality that correlates with the patient's symptoms and physical examination findings. Surgery is not supported when imaging findings do not correlate with the clinical presentation.
- Nicotine abstinence is required for fusion procedures because nicotine is associated with impaired bone healing and increased risk of non-union. Fusion criteria generally require the patient to be nicotine-free, which may be confirmed through cotinine testing. This requirement does not apply to urgent or emergent fusion procedures when delaying treatment would compromise the patient's condition.

Standardized Spine Assessments

- modified Japanese Orthopaedic Association (mJOA) score grades cervical myelopathy severity (motor, sensory, and bladder function) and is used to categorize myelopathy as mild, moderate, or severe, and informs urgency and timing of decompression.
- Neck Disability Index (NDI) is the cervical counterpart of the ODI, a 10-item questionnaire scored 0–100% measuring how neck pain limits daily function. It is used to document disability for cervical conditions and procedures (e.g., ACDF).
- Numeric Rating Scale (NRS) is a simple 0–10 verbal or written pain rating, often used interchangeably with the VAS to document pain intensity at rest and with activity.
- Oswestry Disability Index (ODI) is a 10-item questionnaire scored 0–100% that measures how low back pain limits daily activities (lifting, walking, sitting, sleep, personal care). It is the most widely used measure of lumbar-related disability, documenting functional impairment and improvement.
- Roland-Morris Disability Questionnaire (RMDQ) is a 24-item yes/no measure of low back pain–related disability, an alternative to the ODI for tracking functional limitation.
- Visual Analog Scale (VAS) is a patient-reported pain score, typically marked on a 0–100 mm line or rated 0–10, used to quantify back, neck, arm, or leg pain before and after treatment.

## SUPPORTIVE LITERATURE

Cervical Arthroplasty

Early pivotal United States Food and Drug Administration (FDA) Investigational Device Exemption (IDE) randomized controlled trials (RCTs) demonstrated that cervical disc arthroplasty (CDA) preserves segmental motion and provides clinical outcomes comparable to anterior cervical discectomy and fusion (ACDF) in appropriately selected patients with symptomatic cervical degenerative disc disease. Evidence from single-level and multilevel studies supports durable improvements in pain, disability, and neurologic outcomes (Heller 2009; Zigler 2013; Burkus 2014).

Kim et al (2021) reported the 10-year outcomes from the prospective multicenter Mobi-C FDA IDE clinical trial in patients undergoing one- or two-level CDA. Patients maintained significant

improvement from baseline in NDI, neck and arm pain, neurologic function, and segmental range of motion (ROM) through 10 years, with only two subsequent surgeries reported after 7 years. The authors concluded that CDA remained a safe and effective treatment for one- and two-level cervical degenerative disc disease through 10 years of follow-up.

Sasso et al (2024) reported 20-year outcomes from the prospective randomized FDA IDE trial comparing BRYAN CDA with ACDF in 47 patients with single-level cervical radiculopathy. Follow-up was available for 91.3% of participants, with both groups demonstrating sustained, statistically significant improvement in NDI and VAS neck and arm pain from baseline. There was no significant difference between CDA and ACDF in 20-year NDI, VAS neck pain, or VAS arm pain scores. Reoperation was reported in 10.0% of CDA patients and 41.7%, ACDF patients (P = 0.039), with no arthroplasty device failures requiring index-level device reoperation. The authors concluded that both CDA and ACDF were effective treatments for cervical radiculopathy, with CDA demonstrating lower reoperation rates over long-term follow-up.

Foley et al (2024) reported the corresponding 20-year radiographic outcomes from the BRYAN FDA IDE trial. The study found that CDA maintained index-level ROM (P = 0.952) and preserved greater overall cervical ROM than ACDF (47.8° vs. 33.4°, P = 0.005). CDA was also associated with significantly lower rates of adjacent-segment degeneration (P < 0.005) and adjacent-level ossification (P < 0.001).

Yakdan et al (2025) performed a systematic review and meta-analysis of 25 RCTs (35 studies) comparing CDA (n=2,449) and ACDF (n=2,081) for degenerative disc disease. CDA demonstrated higher rates of neurological and overall success, lower rates of adjacent level disease and reoperation, greater ROM at the operated level, and higher rates of heterotopic ossification. Operative times were significantly longer than with ACDF. Despite identified study limitations (e.g., inclusion of myelopathic patients and variations in follow-up between treatment groups contributed to heterogeneity among studies), the authors concluded the study found CDA showed comparable or potentially more favorable outcomes in achieving overall and neurological success, with a lower incidence of adjacent-level degeneration, and reoperation rates, but longer operative time.

Lumbar Discectomy / Microdiscectomy

Overall, in patients with lumbar radiculopathy with disc herniation who receive discectomy, there is sufficient evidence to support the use of discectomy in patients who have not responded to usual care for 6 weeks, but the net benefit is uncertain because of the lack of a robust RCT comparing discectomy with a comprehensive conservative treatment program. The evidence is limited by a lack of high-quality trials. In most trials, a high percentage of patients in the conservative care group crossed over to surgery.

Weinstein et al (2006) reported on SPORT, a moderately-large trial that compared discectomy to non-operative care in patients with lumbar disc herniation and included both a randomized and a non-randomized component. The RCT included 501 patients randomized to discectomy or to usual care. Discectomy was performed by the open technique, and, in some cases, the medial border of the superior facet joint was removed. Crossover was allowed during the trial; 107 of the 245 patients

assigned to usual care underwent surgery, and 140 of the 245 patients assigned to surgery underwent surgery. The main outcomes were changes from baseline in the bodily pain and physical function subscales of the SF-36, and the modified Oswestry Disability Index (ODI) measured at time points up to two years. Secondary outcomes included self-reported improvement, work status, satisfaction with care, and a symptom severity measure (Sciatica Bothersomeness Index). For the primary outcomes evaluated using ITT analysis, improvements in ODI scores were superior for the surgery group at three months, but, at the one- and two-year follow-ups, there were no significant group differences on either primary outcome. For secondary outcomes, there were significant improvements for the surgery group on the Sciatica Bothersomeness Index at all time points, and satisfaction with care was superior for the surgery group at three (3) months, but not at longer time points. A secondary analysis was performed on a treatment-received basis, and this analysis showed significantly greater improvements for the surgery group at all time points. The estimated treatment effects for the SF-36 bodily pain and physical function subscales were 15.0 and 17.5, respectively, on a 0-to-100 scale. The estimated change in the ODI score was -15.0 on a 0 to 100 scale.

Clark et al (2020) published a systematic review assessing the efficacy, safety, and cost of surgical versus nonsurgical management of lumbar radiculopathy. The systematic review included seven RCTs (5 discectomy and/or microdiscectomy; 2 percutaneous disc decompression with or without coblation) published between January 2007 and April 2019. Results revealed that surgery reduced VAS-leg pain scores as compared to nonsurgical management at up to week 26; however, the differences in these scores did not persist at 1 year or later. Regarding function and disability, the evidence was mixed with minimal differences between surgical and nonsurgical management at 2 years. Comparable improvements in quality of life, neurologic symptoms, and return to work were seen with no surgical deaths and infrequent surgical morbidity reported. The authors of the systematic review rated 5 included RCTs as having a high risk of bias due to inadequate methods of randomization or allocation concealment, lack of blinding, crossover, and attrition.

Bailey et al (2020) published a prospective RCT from a single Canadian site involving 128 patients with persistent sciatica lasting 4 to 12 months and lumbar disc herniation. Enrolled patients were randomly assigned to undergo microdiscectomy or receipt of 6 months of standardized nonoperative care (education regarding day-to-day functioning, activity and exercise, oral analgesics, active physiotherapy, epidural glucocorticoid injections) followed by surgery if necessary. Follow-up was performed at 6 weeks, 3 months, 6 months, and 1 year after enrollment. Results revealed that the surgical group experienced a significant reduction in the VAS-leg pain intensity score at 6 months as compared to the nonsurgical group. At 1 year, a continued reduction in leg-pain intensity, as well as ODI score and pain, was observed in the surgical group. There was a potential impact on external validity with this trial as both surgeons and patients may have been less inclined to undertake nonsurgical care if severe sciatica was present. Additionally, the generalizability of this study may be diminished due to its single-center nature and up to 20% of the data for the primary outcome were absent. A total of 22 patients from the nonsurgical group ultimately crossed over to surgery due to intractable sciatic pain.

Smoking

Tobacco use is considered a risk factor for poor healing and is associated with non-union. It is well-established that smoking is a preventable cause of morbidity and mortality. Lumbar fusion is in most situations an elective surgery; it is strongly recommended that individuals be in the best physical condition prior to undergoing surgery.

Cotinine, the primary metabolite of nicotine, is currently regarded as the best biomarker of tobacco smoke exposure. Measuring cotinine is preferable to measuring nicotine because cotinine persists longer in the body. Non-smokers exposed to typical levels of second-hand smoke have serum cotinine levels lower than one ng/ml, with heavy exposure to second-hand smoke producing levels in the 1-10 ng/ml range. Active smokers almost always have levels higher than 10 ng/ml and sometimes higher than 500 ng/ml. Therefore, non-smoking is defined as a serum cotinine level of less than or equal to 10 ng/ml.

Khalid et al (2022) evaluated 31,935 patients undergoing single-level lumbar fusion , including active smokers, patients receiving smoking cessation therapy, and patients without a smoking history.. Patients undergoing smoking cessation therapy had lower odds of any postoperative complication compared with active smokers (OR 0.86, 95 % CI: 0.80 to 0.93) The authors concluded smoking cessation therapy within 90 days of surgery decreased the likelihood of all-cause post-operative complications. However, there were no between-group differences in the likelihood of pseudarthrosis, revision surgery, or re-admission within 90 days.

In a retrospective database study, Connor et al (2022) 703,051 patients who underwent elective spine surgery with discectomy, fusion, or decompression for degenerative cervical or thoracolumbar spine disorders. After adjustment for patient and hospital characteristics, tobacco use was independently associated with re-admission at 90 days (OR 1.05, 95 % CI: 1.03 to 1.07, $p < 0.0001$), but not 30 days (OR 1.02, 95 % CI: 1.00 to 1.05, $p = 0.045$). Postoperative infection was the most common reason for both 30- and 90-day readmissions. The authors concluded that tobacco use is a known risk factor for adverse health events and should be considered when selecting patients for spine surgery

Annular Repair Following Spinal Surgery

Thome et al (2018) conducted a randomized controlled trial at 21 European centers to determine whether adding a bone-anchored annular closure device (ACD) to limited microdiscectomy reduced reherniation and reoperation rates and improved overall success compared with microdiscectomy alone. A total of 554 patients were randomized to the ACD group (n=267) or control (n=283). Eligible patients were 21 to 75 years of age with imaging-confirmed single-level lumbar disc herniation between L1 and S1, disc height of 5 mm or greater, and failure of at least 6 weeks of nonsurgical treatment. At 2 years, symptomatic reherniation was lower in the ACD group (12% vs. 25%; p<.001), as was reoperation (5% vs. 13%; p=.0001), with no difference in all-cause serious adverse events between groups.

Longer-term follow-up reinforced these findings. At 3 years, ACD discectomies resulted in fewer symptomatic reherniations (15% vs. 30%) and fewer reoperations (11% vs. 19%), with modest improvements in disability and quality-of-life scores favoring the ACD group (Kienzler, 2019). Four-

year reoperation rates were 14.4% with ACD versus 21.1% with control (Nanda et al., 2019). At 5 years, outcomes remained lower in ACD patients, with reduced risk of symptomatic reherniation (18.8% vs. 31.6%; p<.001) and reoperation (16.0% vs. 22.6%; p=.03) (Thome, 2021). A notable limitation of this body of evidence is that investigators were not blinded to treatment assignment, and only patients at select sites were blinded.

Miller LE et al (2020) published a systematic review and meta-analysis of the annular closure device in patients at high risk for lumbar disc reherniation, including four trials (two randomized controlled trials). The 2018 Thome trial was the only study to demonstrate a statistically significant reduction in symptomatic reherniation or reoperation at 2 years. The other three trials showed nonsignificant reductions for both outcomes. Overall, the meta-analysis favored use of the annular device for post-discectomy patients with large annular defects.

Stabilization/Distraction Implants

Schmidt et al. (2018) reported results of a randomized controlled trial in 225 patients with moderate-to-severe lumbar spinal stenosis and back pain, with or without spondylolisthesis, who underwent open microsurgical decompression with interlaminar stabilization using the coflex device (n=110) or decompression alone (n=115). At 24 months, composite clinical success was significantly higher in the coflex group than in the decompression-alone group (58.4% vs. 41.7%; p=.017), primarily driven by fewer epidural steroid injections (4.5% vs. 14.8%; p=.010). No statistically significant differences were observed in ODI success among patients censored for secondary interventions (75.6% vs. 70.4%; p=.47), overall ODI success (55% vs. 44%; p=.091), or other clinical outcomes, including ZCQ and VAS scores. Limitations included potential bias, inconsistent reporting of intention-to-treat analyses, and incomplete outcome reporting, with primary outcome data available for 204 of 254 randomized patients. The impact of the missing data on study results was not reported.

Li et al (2023) conducted a systematic review and meta-analysis to investigate evidence for the comparison of lumbar dynamic stabilization device Coflex with posterior lumbar fusion for lumbar spinal stenosis. A total of 26 studies were included and relational databases were searched up to October 2022. Lumbar dynamic stabilization device Coflex had shorter operation time (mean P <0.00001), less intraoperative blood loss (P < 0.00001), and shorter hospital stays (P < 0.00001). The Japanese Orthopedic Association (JOA) score and ODI score were higher in the Coflex group during early follow-up. There was no significant difference between the two groups with the extension of follow-up time. Moreover, the Coflex group had a lower VAS score than fusion treatment (P < 0.00001). Finally, the Coflex group had lower total complications rate (P= 0.03), lower ASD rate (P=0.001), and higher range of motion (P < 0.00001), but there was no significant difference in reoperation rate and internal fixation problems rate.

Xin et al (2023) conducted a meta-analysis of eight randomized controlled trials including 852 patients to evaluate the safety and effectiveness of interspinous spacers compared with decompressive surgery for lumbar spinal stenosis. Outcomes were generally comparable between groups with respect to hospital stay, blood loss, spinous process fracture, disc height loss, VAS pain scores, ODI scores, and Zurich Claudication Questionnaire symptom severity scores. However, interspinous spacer implantation was associated with a higher rate of reoperation than

decompressive surgery. Limitations included the relatively small, pooled population and limited long-term follow-up. The authors concluded that additional well-designed studies with longer follow-up are needed to further evaluate the efficacy and safety of interspinous spacers.

Disc Herniation/Degenerative Disc Disease (DDD)

Current evidence, which includes a large, multi-center, randomized, controlled trial (RCT) by Weinstein (2006) known as Spine Patient Outcomes Research Trial (SPORT), supports that surgical treatment with discectomy improves outcomes for lumbar disc herniation with radiculopathy. However, there is no evidence to support that the addition of spinal fusion to discectomy improves outcomes in patients with the sole indication of lumbar disc herniation without instability.

Spinal Stenosis with Spondylolisthesis

The SPORT RCT (Weinstein 2007 and 2009) compared surgical and nonsurgical treatment for lumbar degenerative spondylolisthesis. All patients had neurogenic claudication or radicular leg pain associated with neurologic signs, spinal stenosis shown on cross-sectional imaging, and degenerative spondylolisthesis shown on lateral radiographs, with symptoms persisting for at least 12 weeks. There were 304 patients in a randomized cohort and 303 patients in an observational cohort. About 40% of the randomized cohort crossed over in each direction by two years of follow-up. At the four-year follow-up timepoint, 54% of patients randomized to non-operative care had undergone surgery. Five percent of the surgically treated patients received decompression only, and 95% underwent decompression with fusion. Analysis was by the treatment that was received, due to the high percentage of crossovers. This analysis, controlled for baseline factors, showed a significant advantage for surgery at up to four years of follow-up for all primary and secondary outcome measures.

Scoliosis

Treatment of scoliosis currently depends on three factors: etiology (idiopathic, congenital, secondary), curve severity (Cobb angle), and the remaining skeletal growth at presentation. Progression risk rises with larger curves and greater skeletal immaturity, with curves in the 25°–40° range in a patient with substantial growth remaining (e.g., low Risser/Sanders stage, open triradiate cartilage) carries a meaningfully elevated risk of progression. Since large curves, particularly thoracic curves, may progress into adulthood and large thoracic deformities can compromise pulmonary function, and because untreated scoliosis is associated with increased back pain in adulthood, surgical correction with spinal fusion is generally recommended once curves progress to approximately 45°–50° or more.

Kolenko et al (2020) states that children who have curves approaching 50° should be referred to an orthopedic surgeon for consultation. The goals of surgical treatment include preventing curve progression while obtaining spinal correction, realignment, and multilevel fusion. Corrective surgeries most frequently follow a posterior approach, but anterior and a combination of anterior and posterior surgery are dependent on surgeon preference and curve type. Current techniques aim to either fuse the spine or modulate growth. Both posterior and anterior spinal fusions use a combination of implants to provide surgical correction and result in 15% to 48% Cobb angle improvement on the

coronal plane.

Abdelaal et al (2025) published a systematic review and meta-analysis comparing anterior vertebral body tethering (VBT) with posterior spinal fusion (PSF) for adolescent idiopathic scoliosis. Ten comparative cohort studies comprising 1168 patients were included. At 2-year follow-up, VBT was associated with less radiographic correction than PSF in the main thoracic curve and proximal thoracic curve, while no significant differences were observed in main thoracic Cobb angle overall or in lumbar curve correction. VBT also demonstrated perioperative advantages, including significantly shorter operative time, less blood loss, and shorter hospital stay. However, VBT carried a significantly higher revision surgery risk compared with PSF. Study authors concluded that while VBT offers meaningful perioperative and recovery advantages and comparable short-term patient-reported outcomes in selected skeletally immature patients, it results in less consistent radiographic correction and substantially higher revision rates than PSF.

Dynamic Stabilization Systems/Devices

The available evidence does not demonstrate that spinal dynamic stabilization devices improve health outcomes compared with the established standard of instrumented fusion. The highest-quality data, including a multicenter double-blind randomized trial (Meyer 2022), show outcomes comparable to fusion without proven long-term superiority. The evidence is largely confined to the lumbar spine and is limited by short follow-up, heterogeneity, and publication bias. No clinical practice guideline endorses dynamic stabilization as superior to or a substitute for fusion. Larger randomized trials with longer follow-up are needed before these devices can be recommended over the established fusion standard.

Interspinous Fixation Devices (IFDs)

There is a lack of high-quality comparative evidence on the efficacy of IFDs in combination with interbody fusion. Reported risks include, while a potential benefit is a reduction in adjacent segment degeneration. Randomized trials with longer follow-up are needed to evaluate the risks and benefits following use of IFDs compared with the established standard (pedicle screw with rod fixation).

## PROFESSIONAL GUIDELINE(S)

Cervical Arthroplasty (Replacement)

The North American Spine Society (NASS) coverage policy for Cervical Artificial Disc Replacement (2015; revised Feb 2024) indicates that cervical artificial disc replacement may be indicated for the following diagnoses with qualifying criteria, when appropriate:

- Radiculopathy related to nerve root compression from one- or two- level degenerative disease (either herniated disc or spondylotic osteophyte) from C3-7 in the following scenarios:
    - Persistent symptoms despite at least 6 weeks of nonoperative management.
    - Progressive or functionally limiting weakness correlating with the compressed nerve root.
    - Inability to perform normal work duties or necessary activities of daily living because of

severity of symptoms, despite nonoperative management.

- Myelopathy or myeloradiculopathy related to central spinal stenosis from one- or two-level degenerative disc disease from (either herniated disc or spondylotic osteophyte) C3-4.
- There is no significant evidence at this time to support the following:
  - Its use for 3 or more levels.
  - It's use for isolated axial neck pain. Neck pain along with radiculopathy/myeloradiculopathy, is not an exclusionary criterion. There is early evidence for use in treatment of adjacent segment disease following an index fusion.

Lumbar Arthrodesis

In 2011, the North American Spine Society (NASS) issued evidence-based guidelines on the diagnosis and treatment of degenerative lumbar spinal stenosis. The guidelines stated that patients with mild symptoms of lumbar spinal stenosis are not considered surgical candidates; however, decompressive surgery was suggested to improve outcomes in patients with moderate-to-severe symptoms of lumbar spinal stenosis (grade B recommendation). NASS also indicated that current evidence was insufficient to recommend for or against the placement of interspinous process spacing devices to treat spinal stenosis. A 2013 update of this guideline from the Degenerative Lumbar Spinal Stenosis Work Group of the NASS notes the same recommendations.

In July 2018, the National Institute for Health and Care Excellence (NICE) provided evidence-based recommendations on transaxial interbody lumbosacral fusion for low back pain in adults. The recommendation, based on a literature review conducted in December 2017, states, "Evidence on the safety of transaxial interbody lumbosacral fusion for severe chronic low back pain shows that there are serious but well-recognized complications. Evidence on efficacy is adequate in quality and quantity. Therefore, this procedure may be used provided that standard arrangements are in place for clinical governance, consent and audit. This procedure should only be done by a surgeon with specific training in the procedure, who should carry out their initial procedures with an experienced mentor."

Lumbar Decompression

In 2022, NASS issued coverage policy recommendations related to lumbar decompression and included the following diagnoses with qualifying criteria: Lumbar spinal stenosis (primary or recurrent); Synovial facet cyst associated with either radiculopathy or neurogenic claudication; cauda equina syndrome caused by prominent compression of the thecal sac in the lumbar spine, with resultant saddle anesthesia, new onset loss of bowel/bladder function, or new onset of lower extremity neurologic deficits not explained by a more proximal lesion; tumor; fracture; epidural/subdural hematoma, infection, degenerative/isthmic spondylolisthesis; or additional diagnoses requiring non-decompressive laminectomies/laminotomies or other dorsal approaches.

Lumbar Discectomy

The North American Spine Society (NASS, 2019) coverage policy for lumbar discectomy recommends

that primary or recurrent lumbar disc herniation with radiculopathy indicated when both criteria are met:

- Lumbar radiculopathy is present, and a correlative lesion is present on advanced imaging.
- Presence of symptoms for at least 6 weeks and inability to tolerate or failure to respond to 4 weeks of nonsurgical care, including but not limited to physical therapy, chiropractic treatment, and/or fluoroscopic-guided epidural steroid injections

Bone-Anchored Annular Closure Device (ACD)

In 2025, the International Society for the Advancement of Spine Surgery (ISASS) updated recommendations for bone-anchored annular closure device as follows: "Based on the accumulating clinical evidence, ISASS reiterates its position that in patients with symptomatic lumbar disc herniation (LDH) with radiculopathy undergoing primary discectomy with large (≥6 mm wide) annular defects, bone-anchored annular closure may be used to sustain the treatment benefits of discectomy by reducing the risk of recurring LDH and the need for reoperation." ISASS recommends consideration of annular closure devices in:

- "Symptomatic LDH with radiculopathy, confirmed by clinical history, physical examination, and imaging.
- Single-level disc herniation L4 to L5 or L5 to S1.
- Moderately preserved disc height: ≥5 mm posterior disc height.
- Large annular defect (between 4 and 6 mm tall and between 6 and 10 mm wide) visualized intraoperatively after discectomy."

Percutaneous Lumbar Discectomy / Disc Decompression

In 2022, the American Society of Pain and Neuroscience (ASPN) (Deer 2022) published a consensus guideline outlining best practices for minimally invasive lumbar spinal stenosis treatment. The following recommendation was provided with regard to the use of percutaneous image-guided lumbar decompression: "Percutaneous image- guided decompression should be considered for the treatment of symptomatic lumbar spinal stenosis with the presence of neurogenic claudication, with less than or equal to a grade 2 spondylolisthesis, and with a ligamentum flavum hypertrophy greater than or equal to 2.5mm." Grade A; Level of certainty high; Level of evidence 1-A.

Pre-operative Optimization

Harrop et al (2021) published the Congress of Neurological Surgeons (CNS) evidence-based guideline for preoperative surgical risk assessment, with the following findings

- Individuals undergoing spinal fusion surgery who are active smokers should be counseled regarding the increased risk of reoperation. (Grade B)
- There is insufficient evidence that cessation of smoking before spine surgery decreases the risk of reoperation; however, patients should be counseled to abstain from smoking before and after spinal fusion surgery. (Grade Insufficient)

- Diabetic individuals undergoing spine surgery should have a preoperative HbA1c test and be counseled regarding the increased risk of reoperation or infection when HbA1c is greater than 7.5%. (Grade B)
- There is conflicting evidence regarding the association between elevated BMI and reoperation or surgical site infection; however, patients with elevated BMI should be counseled regarding the potential increased risk. (Grade Insufficient)

According to the 2025 NASS clinical guidelines for antithrombotic therapies for adults undergoing spine surgery:

- There is fair evidence suggesting that chemoprophylaxis is not associated with increased hemorrhagic complication rates in patients undergoing elective spine surgery. (Grade B)
- It is suggested that the use of chemoprophylaxis is not associated with an increased hemorrhagic complication rate in patients undergoing surgery for spine trauma. (Grade B)

Stabilization / Distraction Implants

In 2025, the North American Spine Society (NASS) published three coverage recommendations for interspinous devices: interspinous decompression devices, interspinous devices without fusion and without decompression, and interspinous fusion devices.

## REGULATORY STATUS

The U.S. Food and Drug Administration (FDA) regulates spinal implants and spinal fixation and instrumentation used during spine procedures as medical devices. All require FDA approval before marketing and use in the United States to ensure they are safe and effective for human use. Refer to the FDA Medical Device website. Available from: https://www.fda.gov/medical-devices [accessed 2026 Oct 1]

The FDA lists the most serious type of medical device recalls as well as early alert communications about corrective actions being taken by companies that the FDA believes are likely to be the most serious type of recalls. Available from: https://www.fda.gov/medical-devices/medical-device-safety/medical-device-recalls-and-early-alerts [accessed 2026 Oct 1]

## CODE(S)

- Codes may not be covered under all circumstances.
- Code list may not be all inclusive (AMA and CMS code updates may occur more frequently than policy updates).
- (E/I)=Experimental/Investigational
- (NMN)=Not medically necessary/appropriate

### CPT Codes

| Code | Description |
|---|---|

| | |
|---|---|
| 22207 | Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (e.g., pedicle/vertebral body subtraction); lumbar |
| 22214 | Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; lumbar |
| 22224 | Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; lumbar |
| 22526 (E/I) | Percutaneous intradiscal electrothermal annuloplasty, unilateral or bilateral including fluoroscopic guidance; single level |
| 22533 | Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar |
| 22548 | Arthrodesis, anterior transoral or extraoral technique, clivus-C1-C2 (atlas-axis), with or without excision of odontoid process |
| 22551 | Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2 |
| 22554 | Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below C2 |
| 22558 | Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar |
| 22586 | Arthrodesis, pre-sacral interbody technique, including disc space preparation, discectomy, with posterior instrumentation, with image guidance, includes bone graft when performed, L5-S1 interspace |
| 22590 | Arthrodesis, posterior technique, craniocervical (occiput-C2) |
| 22595 | Arthrodesis, posterior technique, atlas-axis (C1-C2) |
| 22600 | Arthrodesis, posterior or posterolateral technique, single interspace; cervical below C2 segment |
| 22612 | Arthrodesis, posterior or posterolateral technique, single level; lumbar (with lateral transverse technique, when performed) |
| 22630 | Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; lumbar |
| 22633 | Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace and segment; lumbar |

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| 22800 | Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments |
| 22802 | Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments |
| 22804 | Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments |
| 22808 | Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments |
| 22810 | Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebral segments |
| 22812 | Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebral segments |
| 22843 | Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 7 to 12 vertebral segments (List separately in addition to code for primary procedure) |
| 22849 | Reinsertion of spinal fixation device |
| 22850 | Removal of posterior nonsegmental instrumentation (e.g., Harrington rod) |
| 22852 | Removal of posterior segmental instrumentation |
| 22855 | Removal of anterior instrumentation |
| 22856 | Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection); single interspace, cervical |
| 22857 | Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression), single interspace, lumbar |
| 22861 | Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical |
| 22862 | Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; lumbar |
| 62287 (E/I) | Decompression, percutaneous, of nucleus pulposus of intervertebral disc, any method utilizing needle-based technique to remove disc material under fluoroscopic imaging or other form of indirect visualization, with discography and/or epidural injection(s) at the treated level(s), when performed, single or multiple levels, lumbar. |

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|---|---|
| 62330 | Decompression, percutaneous, with partial removal of the ligamentum flavum, including laminotomy for access, epidurography, and imaging guidance (i.e., CT or fluoroscopy), bilateral; one interspace, lumbar |
| 62380 | Endoscopic decompression of spinal cord, nerve root(s), including laminotomy, partial facetectomy, foraminotomy, discectomy and/or excision of herniated intervertebral disc, 1 interspace, lumbar |
| 63001 | Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; cervical |
| 63005 | Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; lumbar, except for spondylolisthesis |
| 63011 | Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; sacral |
| 63012 | Laminectomy with removal of abnormal facets and/or pars interrticularis with decompression of cauda equina and nerve roots for spondylolisthesis, lumbar (Gill type procedure) |
| 63015 | Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), more than 2 vertebral segments; cervical |
| 63017 | Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), more than 2 vertebral segments; lumbar |
| 63020 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical |
| 63030 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar |
| 63035 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; each additional interspace, cervical or lumbar (List separately in addition to code for primary procedure) |
| 63040 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, |

| | |
|---|---|
| | reexploration, single interspace; cervical |
| 63042 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; lumbar |
| 63045 | Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis]), single vertebral segment; cervical |
| 63047 | Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis]), single vertebral segment; lumbar |
| 63050 | Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments; |
| 63051 | Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments; with reconstruction of the posterior bony elements (including the application of bridging bone graft and non-segmental fixation devices [e.g., wire, suture, mini-plates], when performed) |
| 63056 | Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g., herniated intervertebral disc), single segment; lumbar (including transfacet, or lateral extraforaminal approach) (e.g., far lateral herniated intervertebral disc) |
| 63075 | Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, single interspace |
| 63081 | Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, single segment |
| 63102 | Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decom-pression of spinal cord and/or nerve root(s) (e.g., for tumor or retropulsed bone fragments); lumbar, single segment |
| 63300 | Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, cervical |
| 63304 | Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, cervical |

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**HCPCS Codes**

| Code | Description |
|---|---|
| S2350 | Diskectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; lumbar, single interspace |

**ICD10 Codes**

| Code | Description |
|---|---|
| C72.0 | Malignant neoplasm of spinal cord |
| C79.40 | Secondary malignant neoplasm of unspecified part of nervous system |
| G06.1 | Intraspinal abscess and granuloma |
| D16.6 | Benign neoplasm of vertebral column |
| D32.1 | Benign neoplasm of spinal meninges |
| D33.4 | Benign neoplasm of spinal cord |
| M40.35-M40.37 | Flatback syndrome: thoracolumbar, lumbar or lumbosacral region (code range) |
| M41.05-M41.9 | Scoliosis (code range: codes ending in 5 are thoracolumbar, ending in 6 are lumbar and ending in 7 are lumbosacral) |
| M43.00-M43.07 | Spondylolysis: thoracolumbar, lumbar or lumbosacral region (code range) |
| M43.10-M43.19 | Spondylolisthesis (code range) |
| M43.27 | Fusion of spine, lumbosacral region |
| M48.00-M48.08 | Spinal stenosis (code range) |
| M51.06 | Intervertebral disc disorders with myelopathy, lumbar region |
| M51.16-M51.17 | Intervertebral disc disorders with radiculopathy, lumbar/lumbosacral regions |
| M51.26-M51.27 | Other intervertebral disc displacement, lumbar/lumbosacral regions |
| M51.36-M51.37 | Other intervertebral disc degeneration, lumbar/lumbosacral regions |

| Code | Description |
|---|---|
| M51.46-M51.47 | Schmorl's nodes, lumbar/lumbosacral regions |
| M51.86-M51.87 | Other intervertebral disc disorders, lumbar/lumbosacral regions |
| M53.2X5-M53.2X7 | Spinal instabilities: thoracolumbar, lumbar or lumbosacral region (code range) |
| M53.86-M53.87 | Other specified dorsopathies, lumbar or lumbosacral region (code range) |
| M54.16-M54.17 | Radiculopathy, lumbar/lumbosacral regions |
| M54.5 | Low back pain |
| M79.604-M79.609 | Pain in leg/limb (code range) |
| M79.651-M79.676 | Pain in thigh/lower leg/foot/toes (code range) |
| M96.0 | Pseudarthrosis after fusion or arthrodesis |
| M96.1 | Postlaminectomy syndrome, not elsewhere classified |
| M99.23 | Subluxation stenosis of neural canal of lumbar region |
| M99.33 | Osseous stenosis of neural canal 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 |
| S32.000A-S32.059S | Fracture of lumbar spine (code range) |

## REFERENCES

Reference Links:

- Cervical Arthrodesis, including ACDF

- Cervical Corpectomy
- Cervical Arthroplasty
- Anterior Cervical Decompression without Fusion; Posterior Cervical Decompression ± Fusion
- Anterior AND Posterior Cervical Decompression with or without Fusion
- Lumbar Arthrodesis, including Repeat Lumbar Fusion ± Decompression
- Lumbar Decompression
- Lumbar Discectomy / Microdiscectomy
- Lumbar Osteotomy
- Percutaneous Lumbar Discectomy / Disc Decompression
- Pediatric Scoliosis
- Stabilization/Distraction Implants
- Preoperative Optimization

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## SEARCH TERMS

Not Applicable

## CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS)

Cervical Fusion (LCD L39770) [accessed 2026 Sep 24]

Facet Joint Interventions for Pain Management (LCD L35936) [accessed 2026 Oct 2]

Laser Procedures (NCD 140.5) [accessed 2026 Sep 10]

Percutaneous Image-Guided Lumbar Decompression for Lumbar Spinal Stenosis (NCD 150.13) [accessed 2026 Sep 10]

Thermal Intradiscal Procedures (TIPs) (NCD 150.11) [accessed 2026 Sep 10]

The following are not specifically addressed in National or Regional Medicare coverage determinations or policies:

- Artificial cervical intervertebral disc
- Interspinous process decompression devices
- Lumbar decompression, fusion, posterior column osteotomy (PCO), three-column osteotomy, microdiscectomy
- Minimally Invasive/Minimal Access Lumbar Interbody Fusion

## PRODUCT DISCLAIMER

- Services are contract dependent; if a product does not cover a service, medical policy criteria do not apply.
- If a commercial product (including an Essential Plan or Child Health Plus product) covers a specific service, medical policy criteria apply to the benefit.
- If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit.
- If a Medicare product (including Medicare HMO-Dual Special Needs Program (DSNP) product)

covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.

- If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line.

| **POLICY HISTORY/REVISION** | |
|---|---|
| **Committee Approval Dates** | |
| 09/17/26, 10/15/26 | |
| **Date** | **Summary of Changes** |
| 01/01/27 | • Original effective date |
| 10/15/26 | • Policy edit to remove all site-of-care criteria and smoking-status criteria from lumbar decompression requirements; and non-intent-changing edits to formatting and language. |
| 09/17/26 | • New Policy |