

# **Lumbar Spinal Stenosis**

**Clinical Guidelines for Medical Necessity Review** 

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# **Important Notices**

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#### **Guideline Information**:

Specialty Area: Diseases of the musculoskeletal system and connective tissue (M00-M99)CarePath Group: SpineCarePath Name: Lumbar Spinal Stenosis (M48)Type: [X] Adult (18+ yo) | [\_] Pediatric (0-17yo)

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# **Care Path Overview**

# **Care Path Clinical Discussion**

The North American Spine Society describes degenerative **lumbar spinal stenosis** as "a condition in which there is diminished space available for the neural and vascular elements in the lumbar spine secondary to degenerative changes in the spinal canal."<sup>1</sup> The presentation involves neurogenic claudication, which has a variable clinical presentation. Patients classically complain of 1) symptoms made worse with walking or upright activity, and 2) symptoms improved with resting in a seated or forward flexed position.<sup>1</sup>

Stenosis may be due to herniated disc, spondylosis, or spondylolisthesis. Experts agree that the natural history of mild to moderate stenosis is favorable in one-third to one-half of patients. However, further evaluation and intervention may be warranted in patients who do not experience self-resolution of symptoms, have moderate to severe or progressive symptoms, or have a complex spinal health history. Magnetic resonance imaging (MRI) is the imaging modality of choice.<sup>1</sup> Non-surgical treatment options include exercise and epidural steroid injection. Surgical intervention involves decompression without fusion (in the absence of instability).<sup>12</sup>

The information contained herein gives a general overview of the pathway of this specific diagnosis, beginning with initial presentation, recommended assessments, and treatment options as supported by the medical literature and existing guidelines. It should be noted that the care of patients with spinal health problems is complex. The information below is meant to support clinical decision making in adult patients. It is not necessarily applicable to every case, as the entire clinical picture (including comorbidities, spinal health history, etc.) should be considered.

## **Key Information**

- > Lumbar spinal stenosis is a common cause of low back and leg pain.<sup>3</sup>
- > Approximately 400,000 Americans suffer from lumbar spinal stenosis.<sup>2</sup>
  - Spinal stenosis most often occurs in adults over 60 years of age.<sup>3</sup>
- First-line treatment of lumbar spinal stenosis is non-surgical management that focuses on restoring function and relieving pain.<sup>3</sup>
  - Typical non-surgical treatments include physical therapy, anti-inflammatory medications, and epidural steroid injections.
  - Chiropractic manipulation can help with some of the pain, although spine manipulation can worsen symptoms or cause other injuries.<sup>3</sup>
- Consider surgical management of lumbar spinal stenosis if non-surgical management has not relieved symptoms and the patient has activity limitations due to pain and weakness.
  - Decompression is the preferred surgical technique when there is no spinal instability, spinal deformities, or vertebral destruction.

# **Definitions**

- <u>Straight Leg Raise (SLR) Test:</u> A neurological maneuver in which an examiner gently raises a supine patient's leg by flexing the hip with the knee in full extension. A positive result occurs when the patient experiences pain along the lower limb in the same distribution of the lower radicular nerve roots or when lower limb flexion greater than 45° elicits pain.<sup>4</sup>
- <u>Instability:</u> Spinal stability is the ability of the spine under physiologic loads to limit patterns of displacement so as not to damage or irritate the spinal cord and nerve roots and, in addition, to prevent incapacitating deformity or pain due to structural changes; instability (acute or chronic) refers to an excessive displacement of the spine that would result in a neurologic deficit, deformity, or pain.<sup>5</sup>
- Iatrogenic Instability: Instability caused by previous surgery

# **Labral Spinal Stenosis**

## What is a "Cohere Care Path"?

These Care Paths organize the services typically considered most clinically optimal and likely to be automatically approved. These service recommendations also include the suggested sequencing and quantity or frequency determined clinically appropriate and medically necessary for the management of most patient care scenarios in this Care Path's diagnostic cohort.

Conservative	Anti-Inflammatory or Pain Management		
Therapy	Physical Therapy PA,*		2 >
Diagnostics	Radiography	•	lon-Si lanag
Advanced	Magnetic Resonance Imaging (MRI) PA,*	<b>O</b>	Non-Surgical Management
Imaging	Computed Tomography (CT) or Computed Tomography Myelogram (CTM) PA		11
Non-Surgical Management	Epidural Steroid Injection PA		
Surgical Management	Lumbar Decompression without Fusion PA		
	Lumbar Decompression with Fusion PA		କ୍ ର
	Interspinous/Interlaminar Spacer Implantation PA		
	Physical Therapy PA,*		
Postperative Care	Home Health PA		
	Skilled Nursing Facility PA		
	Inpatient Rehabilitation PA		

#### Non-SurgicalSurgical ManagementManagement

- Key
- PA = Service may require prior authorization
- \* = Denotes preferred service
- AND = Services completed concurrently
- OR = Services generally mutually exclusive
- = Non-surgical management prior authorization group of services
- e services
  - = Surgical management prior authorization group of services
  - = Subsequent service
  - = Management path moves to a different management path

# **Care Path Diagnostic Criteria**

# **Disease Classification**

Lumbar Spinal Stenosis

## ICD-10 Codes Associated with Classification

ICD-10 Code	Code Description/Definition
G95.9	Disease of spinal cord, unspecified
M41.8	Other forms of scoliosis, site unspecified
M41.86	Other forms of scoliosis, lumbar region
M41.9	Scoliosis, unspecified
M43.05	Spondylolysis, thoracolumbar region
M43.06	Spondylolysis, lumbar region
M43.07	Spondylolysis, lumbosacral region
M43.08	Spondylolysis, sacral and sacrococcygeal region
M43.10	Spondylolisthesis, site unspecified
M43.15	Spondylolisthesis, thoracolumbar region
M43.16	Spondylolisthesis, lumbar region
M43.17	Spondylolisthesis, lumbosacral region
M43.18	Spondylolisthesis, sacral and sacrococcygeal region
M43.26	Fusion of spine, lumbar region
M45.5	Ankylosing spondylitis of thoracolumbar region
M45.6	Ankylosing spondylitis lumbar region
M45.7	Ankylosing spondylitis of lumbosacral region
M45.8	Ankylosing spondylitis sacral and sacrococcygeal region
M45.9	Ankylosing spondylitis of unspecified sites in spine
M46.00	Spinal enthesopathy, site unspecified
M46.05	Spinal enthesopathy, thoracolumbar region
M46.06	Spinal enthesopathy, lumbar region
M46.07	Spinal enthesopathy, lumbosacral region

M46.08	Spinal enthesopathy, sacral and sacrococcygeal region
M46.09	Spinal enthesopathy, multiple sites in spine
M46.20	Osteomyelitis of vertebra, site unspecified
M46.25	Osteomyelitis of vertebra, thoracolumbar region
M46.26	Osteomyelitis of vertebra, lumbar region
M46.27	Osteomyelitis of vertebra, lumbosacral region
M46.28	Osteomyelitis of vertebra, sacral and sacrococcygeal region
M46.30	Infection of intervertebral disc (pyogenic), site unspecified
M46.35	Infection of intervertebral disc (pyogenic), thoracolumbar region
M46.36	Infection of intervertebral disc (pyogenic), lumbar region
M46.37	Infection of intervertebral disc (pyogenic), lumbosacral region
M46.38	Infection of intervertebral disc (pyogenic), sacral and sacrococcygeal region
M46.39	Infection of intervertebral disc (pyogenic), multiple sites in spine
M46.40	Discitis, unspecified, site unspecified
M46.45	Discitis, unspecified, thoracolumbar region
M46.46	Discitis, unspecified, lumbar region
M46.47	Discitis, unspecified, lumbosacral region
M46.48	Discitis, unspecified, sacral and sacrococcygeal region
M46.49	Discitis, unspecified, multiple sites in spine
M47.14	Other spondylosis with myelopathy, thoracic region
M47.15	Other spondylosis with myelopathy, thoracolumbar region
M47.16	Other spondylosis with myelopathy, lumbar region
M47.814	Spondylosis without myelopathy or radiculopathy, thoracic region
M47.815	Spondylosis without myelopathy or radiculopathy, thoracolumbar region
M47.816	Spondylosis without myelopathy or radiculopathy, lumbar region
M47.817	Spondylosis without myelopathy or radiculopathy, lumbosacral region

	Spondylosis without myelopathy or radiculopathy, sacral
M47.818	and sacrococcygeal region
M47.894	Other spondylosis, thoracic region
M47.895	Other spondylosis, thoracolumbar region
M47.896	Other spondylosis, lumbar region
M47.897	Other spondylosis, lumbosacral region
M47.898	Other spondylosis, sacral and sacrococcygeal region
M47.9	Spondylosis, unspecified
M48.00	Spinal stenosis, site unspecified
M48.04	Spinal stenosis, thoracic region
M48.05	Spinal stenosis, thoracolumbar region
M48.06	Spinal stenosis, lumbar region
M48.061	Spinal stenosis, lumbar region without neurogenic claudication
M48.062	Spinal stenosis, lumbar region with neurogenic claudication
M48.07	Spinal stenosis, lumbosacral region
M48.08	Spinal stenosis, sacral and sacrococcygeal region
M48.15	Ankylosing hyperostosis [Forestier], thoracolumbar region
M48.16	Ankylosing hyperostosis [Forestier], lumbar region
M48.17	Ankylosing hyperostosis [Forestier], lumbosacral region
M48.18	Ankylosing hyperostosis [Forestier], sacral and sacrococcygeal region
M48.25	Kissing spine, thoracolumbar region
M48.26	Kissing spine, lumbar region
M48.27	Kissing spine, lumbosacral region
M48.35	Traumatic spondylopathy, thoracolumbar region
M48.36	Traumatic spondylopathy, lumbar region
M48.37	Traumatic spondylopathy, lumbosacral region
M48.8X5	Other specified spondylopathies, thoracolumbar region
M48.8X6	Other specified spondylopathies, lumbar region
M48.8X7	Other specified spondylopathies, lumbosacral region
M48.8X8	Other specified spondylopathies, sacral and sacrococcygeal region

M49.85	Spondylopathy in diseases classified elsewhere, thoracolumbar region
M49.86	Spondylopathy in diseases classified elsewhere, lumbar region
M49.87	Spondylopathy in diseases classified elsewhere, lumbosacral region
M49.88	Spondylopathy in diseases classified elsewhere, sacral and sacrococcygeal region
M51.26	Other intervertebral disc displacement, lumbar region
M51.9	Unspecified thoracic, thoracolumbar and lumbosacral intervertebral disc disorder
M53.2X5	Spinal instabilities, thoracolumbar region
M53.2X6	Spinal instabilities, lumbar region
M53.2X7	Spinal instabilities, lumbosacral region
M53.2X8	Spinal instabilities, sacral and sacrococcygeal region
M54.30	Sciatica, unspecified side
M54.31	Sciatica, right side
M54.32	Sciatica, left side
M96.0	Pseudarthrosis after fusion or arthrodesis
M96.1	Postlaminectomy syndrome, not elsewhere classified
M96.3	Postlaminectomy kyphosis
M96.4	Postsurgical lordosis
M99.13	Subluxation complex (vertebral) of lumbar region
M99.14	Subluxation complex (vertebral) of sacral region
M99.23	Subluxation stenosis of neural canal of lumbar region
M99.24	Subluxation stenosis of neural canal of sacral region
M99.33	Osseous stenosis of neural canal of lumbar region
M99.34	Osseous stenosis of neural canal of sacral region
M99.43	Connective tissue stenosis of neural canal of lumbar region
М99.44	Connective tissue stenosis of neural canal of sacral region
M99.53	Intervertebral disc stenosis of neural canal of lumbar region
M99.54	Intervertebral disc stenosis of neural canal of sacral region
M99.63	Osseous and subluxation stenosis of intervertebral foramina of lumbar region

Osseous and subluxation stenosis of intervertebral foramina of sacral region
Connective tissue and disc stenosis of intervertebral foramina of lumbar region
Connective tissue and disc stenosis of intervertebral foramina of sacral region

# **Presentation and Etiology**

### **Causes and Risk Factors**

- Age greater than 60 years
- Obesity
- Family history

#### **Clinical Presentation**

- Symptoms include lower extremity pain, weakness, fatigue, paresthesias, and sensory changes.
- Gluteal and low back pain (LBP) may or may not be present.
- Symptoms may be bilateral or unilateral.
- Symptoms may present only with activity.
- Exacerbating factors include standing, walking, and other upright exercises.
- Pain may relieve in a sitting or supine position or with forward flexion at the waist.
- The hallmark is lower extremity pain that is made worse by walking.

## **Typical Physical Exam Findings**

The following findings may be found on physical examination singularly or in combination:

- Focal motor weakness or sensory deficit
- Decreased or absent lower extremity reflexes
- Wide-based gait

## Typical Diagnostic Findings

These diagnostic tests may be positive:

- Romberg's test (poor standing balance with eyes closed)
- Straight leg raise (SLR; reproduction of lower extremity pain upon extension at the knee)

However, "there is insufficient evidence to make a recommendation for or against certain physical findings for the diagnosis of degenerative lumbar spinal stenosis," according to the North American Spine Society.<sup>1</sup>

# CarePath Services & Medical Necessity Criteria

# **Conservative Therapy**

## Service: Physical Therapy

#### **General Guidelines**

- Units, Frequency, & Duration: None.
- **Criteria for Subsequent Requests:** Base the medical necessity of subsequent physical therapy on the individual's response to the previous session (i.e., clinically relevant sustained reductions in pain, improvement in functional abilities).
- **Recommended Clinical Approach:** After physical therapy treatment, provide the patient with a tailored exercise program. Nonoperative management is effective for acute radicular pain in approximately 70-80% of cases at an average of 4-6 weeks.
- Exclusions: None.

#### **Medical Necessity Criteria**

Indications

- → Physical therapy is considered appropriate if ANY of the following is TRUE<sup>2</sup>:
  - It has been more than 3 months since the last date of previous physical therapy, and the symptoms are different from the last presentation.
  - It has been more than 2 weeks since symptom onset.
  - The patient has ANY positive findings from the <u>clinical</u> <u>presentation</u> and <u>typical physical exam findings</u> lists.
  - Post-procedure or postoperative therapy to improve pain or function.

**Non-Indications** 

- → Physical therapy may not be considered appropriate if ANY of the following is TRUE<sup>2</sup>:
  - Progressive neurological deficits
  - Recent physical therapy (in the last 3 months) was unsuccessful.

# <u>Site of Service Criteria</u> Outpatient

HCPCS Code	Code Description/Definition
97010	Application of hot or cold packs
97012	Application of mechanical traction
97014	Application of electrical stimulation
97016	Application of vasopneumatic devices
97018	Application of paraffin bath
97022	Application of whirlpool
97024	Application of diathermy
97026	Application of infrared modality
97028	Application of ultraviolet modality
97032	Application of manual electrical stimulation
97033	Application of iontophoresis
97034	Application of contrast baths
97035	Application of ultrasound modality
97036	Application of Hubbard tank
97039	Modality service
97110*	Therapeutic exercises to develop strength and endurance, range of motion and flexibility
97112	Neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and proprioception for sitting and standing activities
97113	Aquatic therapy with therapeutic exercises
97116	Gait training including stair climbing

97124	Massage including effleurage and petrissage; Massage including effleurage and tapotement; Massage including effleurage, petrissage and tapotement; Massage including petrissage and tapotement
97139	Therapeutic procedure
97140	Manual therapy techniques
97150	Group therapeutic procedures
97164	Physical therapy re-evaluation of established plan of care, high complexity, typical time with patient 20 minutes; Physical therapy re-evaluation of established plan of care, high complexity, typical time with patient and family 20 minutes; Physical therapy re-evaluation of established plan of care, high complexity, typical time with patient's family 20 minutes
97530	Direct therapeutic activities with use of dynamic activities to improve functional performance, each 15 minutes
97535	Home management training, direct one-on-one contact, each 15 minutes; Self-care management training, direct one-on-one contact, each 15 minutes
97537	Community reintegration training, direct one-on-one contact, each 15 minutes; Work reintegration training, direct one-on-one contact, each 15 minutes
97542	Wheelchair management, each 15 minutes
97545	Work conditioning, initial 2 hours; Work hardening, initial 2 hours
97546	Work conditioning, each additional hour; Work hardening, each additional hour
97750	Physical performance measurement with written report, each 15 minutes; Physical performance test with written report, each 15 minutes
97755	Assistive technology assessment with written report, direct one-on-one contact, each 15 minutes

97760	Initial orthotic management and training with assessment and fitting of lower extremities and trunk, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremities, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremity and trunk, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremity, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremity, each 15 minutes; Initial orthotic management and training with assessment and fitting of trunk, each 15 minutes; Initial orthotic management and training with assessment and fitting of upper and lower extremities and trunk, each 15 minutes
97761	Initial prosthetic training of lower extremities, each 15 minutes; Initial prosthetic training of lower extremity, each 15 minutes Initial prosthetic training of upper and lower extremities, each 15 minutes; Initial prosthetic training of upper extremities, each 15 minutes; Initial prosthetic training of upper extremity, each 15 minutes
	Subsequent orthotic management and training of lower extremities and trunk, each 15 minutes Subsequent orthotic management and training of lower extremity and trunk, each 15 minutes Subsequent orthotic management and training of lower extremity, each 15 minutes Subsequent orthotic management and training of upper and lower extremities and trunk, each 15 minutes Subsequent orthotic management and training of upper extremities and trunk, each 15 minutes Subsequent orthotic management and training of upper extremities and trunk, each 15 minutes Subsequent orthotic management and training of upper extremities, each 15 minutes Subsequent orthotic management and training of upper extremities, each 15 minutes Subsequent orthotic management and training of upper extremity and trunk, each 15 minutes Subsequent orthotic management and training of upper extremity, each 15 minutes Subsequent orthotic management and training of upper extremity, each 15 minutes Subsequent orthotic management and training of upper extremity, each 15 minutes
97763	Subsequent orthotic management of lower extremity and

trunk, each 15 minutes
Subsequent orthotic management of lower extremity, each 15 minutes
Subsequent orthotic management of upper and lower
extremities and trunk, each 15 minutes
Subsequent orthotic management of upper extremities and
trunk, each 15 minutes
Subsequent orthotic management of upper extremities, each 15 minutes
Subsequent orthotic management of upper extremity and trunk, each 15 minutes
Subsequent orthotic management of upper extremity, each 15 minutes
Subsequent orthotic training of lower extremity, each 15 minutes
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extremity, each 15 minutes
Subsequent prosthetic management of lower extremities and
trunk, each 15 minutes
Subsequent prosthetic management of lower extremity and
trunk, each 15 minutes
Subsequent prosthetic management of lower extremity, each
15 minutes
Subsequent prosthetic management of upper and lower
extremities and trunk, each 15 minutes
Subsequent prosthetic management of upper extremities and
trunk, each 15 minutes
Subsequent prosthetic management of upper extremities,
each 15 minutes
Subsequent prosthetic management of upper extremity and
trunk, each 15 minutes
Subsequent prosthetic management of upper extremity, each
15 minutes
Subsequent prosthetic training of lower extremity, each 15
Subsequent prosthetic training of upper and lower extremities
and trunk, each 15 minutes
Subsequent prosthetic training of upper extremities and trunk,
each 15 minutes
Subsequent prosthetic training of upper extremities, each 15
minutes
Subsequent prosthetic training of upper extremity and trunk, each 15 minutes
Subsequent prosthetic training of upper extremity, each 15
minutes
Subsequent orthotic management and training of lower
extremities, each 15 minutes
Subsequent orthotic management of lower extremities, each
15 minutes
Subsequent orthotic training of lower extremities and trunk,
each 15 minutes
Subsequent orthotic training of lower extremities, each 15

minutes Subsequent orthotic training of lower extremity and trunk,
each 15 minutes Subsequent prosthetic management and training of lower extremities, each 15 minutes
Subsequent prosthetic management of lower extremities, each 15 minutes
Subsequent prosthetic training of lower extremities and trunk, each 15 minutes
Subsequent prosthetic training of lower extremities, each 15 minutes
Subsequent prosthetic training of lower extremity and trunk, each 15 minutes
Unlisted physical medicine/rehabilitation service or procedure
Physical Therapy
Physical Therapy: Visit Charge
Physical Therapy: Hourly Charge
Physical Therapy: Group Rate
Physical Therapy: Evaluation/Re-evaluation
Physical Therapy: Other Physical Therapy
Evaluation of physical therapy, typically 45 minutes
Evaluation of physical therapy, typically 20 minutes
Evaluation of physical therapy, typically 30 minutes
Re-evaluation of occupational therapy established plan of care, typically 30 minutes
Evaluation of occupational therapy, typically 30 minutes
Evaluation of occupational therapy, typically 45 minutes
Evaluation of occupational therapy established plan of care, typically 60 minutes
Hhcp-serv of pt,ea 15 min

\*Default codes for suggested services

# Advanced Imaging

## Service: Magnetic Resonance Imaging (MRI)

#### **General Guidelines**

- Units, Frequency, & Duration: None.
- Criteria for Subsequent Requests: None.
- Recommended Clinical Approach<sup>1-2,6</sup>:
  - MRI without contrast is the preferred method of advanced imaging. Use MRI with contrast if MRI without contrast is indeterminate.
  - Electrodiagnostic testing may be used if imaging and clinical assessment are misaligned to determine the nonstructural etiology of nerve pathology or other comorbid conditions.
- Exclusions: None.

#### Medical Necessity Criteria

#### Indications

- → MRI is considered appropriate if ALL of the following are TRUE<sup>2.6</sup>:
  - ALL of the following are **TRUE**:
    - The patient has **ANY** positive findings from the <u>clinical</u> <u>presentation</u> and <u>typical physical exam findings</u> lists.
    - The patient fails to show significant improvement in pain or disability level due to symptoms, despite receiving more than 6 weeks of conservative care (defined as a combination of either physical therapy or provider-directed home exercise program AND anti-inflammatory medication or oral steroids.)
  - The patient presents with **ANY** of the following "red flags":
    - Progressive neurological deficits
    - Unsteady gait/balance or generalized lower extremity weakness
    - Hyperreflexia
    - Positive Babinski or clonus
    - Bowel or bladder incontinence
    - Saddle anesthesia

#### **Non-Indications**

→ MRI may not be considered appropriate if ANY of the following is TRUE<sup>6</sup>:

- Non-compatible implanted devices
- Metallic intraocular foreign bodies
- Claustrophobia

## Site of Service Criteria

None

HCPCS Code	Code Description/Definition
72148	MRI of lumbar spinal canal and contents; MRI of lumbar spinal canal and contents without contrast
72149	MRI of lumbar spinal canal and contents with contrast
72158	MRI of lumbar spinal canal and contents without contrast, followed by contrast and further sections
72146	MRI scan of middle spinal canal
72157	MRI scan of middle spinal canal before and after contrast
72195	MRI scan of pelvis
72197	MRI scan of pelvis before and after contrast
72196	MRI scan of pelvis with contrast
72147	MRI scan of middle spinal canal with contrast

## Service: Computed Tomography (CT) or Computed Tomography Myelogram (CTM)

#### <u>General Guidelines</u>

- Units, Frequency, & Duration: None.
- Criteria for Subsequent Requests: None.
- **Recommended Clinical Approach**<sup>1-2.6</sup>: Advanced imaging may not be required at the initial presentation without red flag signs/symptoms. CTM is suggested if MRI findings and physical examination findings are discordant; CTM may be utilized if MRI is contraindicated or indeterminate. CT may be utilized in this patient population if MRI is contraindicated or indeterminate.
- Exclusions: None.

#### Medical Necessity Criteria

Indications

- $\rightarrow$  CT/CTM is considered appropriate if ALL of the following are TRUE<sup>2.6</sup>:
  - If the patient is being considered for a CTM and ALL of the following are true:
    - The patient has **ANY** positive findings from the <u>clinical</u> <u>presentation</u> and <u>typical physical exam findings</u> lists.
    - The patient has failed to show significant improvement in pain or disability level due to symptoms, despite more than 6 weeks of conservative care (conservative care includes a combination of physical therapy, provider-directed home exercise program, and anti-inflammatory/pain management medications or oral steroids).
    - MRI is contraindicated or indeterminate for reasons such as an artifact from a previous surgery (e.g., anomalies in visual representation that impact imaging quality).
  - The patient is being considered for a CTM and presents with ANY of the following red flags:
    - Progressive neurological deficits.
    - Unsteady gait/balance or generalized lower extremity weakness.
    - Hyperreflexia.
    - Positive Babinski or clonus.
    - Bowel or bladder incontinence.
    - Saddle anesthesia.
  - The patient is being considered for a CT and ANY of the following is TRUE:

- The patient meets the criteria for MRI or CTM but cannot receive either service due to contraindications.
- MRI or CTM studies are indeterminate.
- There is a need to obtain additional information not provided by an MRI (e.g., details of the bony anatomy or previous surgery).

#### **Non-Indications**

- → CT/CTM may not be considered appropriate if ANY of the following is TRUE<sup>7-8</sup>:
  - If the patient is being considered for a CTM, and ANY of the following is TRUE:
    - Bleeding disorders.
    - Allergy to iodinated contrast agents.
    - The patient is pregnant.
  - If the patient is being considered for a CT, and ANY of the following is TRUE:
    - The patient is pregnant.

#### Site of Service Criteria

None.

HCPCS Code	Code Description/Definition
72131	CT of lumbar spine; CT of lumbar spine without contrast
72132	CT of lumbar spine with contrast;
72133	CT of lumbar spine without contrast, followed by contrast and further sections
72128	CT scan of middle spine
72192	CT scan pelvis
72193	CT scan pelvis with contrast
72194	CT scan of pelvis before and after contrast
72130	CT scan of middle spine before and after contrast
72129	CT scan of middle spine with contrast
62284	Injection procedure for myelography and computed tomography of lumbar spine; Injection procedure for

	myelography of lumbar spine
62302	Lumbar injection for myelography of cervical spine with radiological supervision and interpretation
62303	Lumbar injection for myelography of thoracic spine with radiological supervision and interpretation
62304	Lumbar injection for myelography of lumbosacral spine with radiological supervision and interpretation
62305	Lumbar injection for myelography of 2 or more regions of spine with radiological supervision and interpretation

# Non-Surgical Management

## Service: Epidural Steroid Injections

#### **General Guidelines**

- Units, Frequency, & Duration: When the medical necessity criteria are met, a total of 3 epidural steroid injections per episode of pain per region may be performed in 6 months.
- **Criteria for Subsequent Requests:** A second injection may be considered if the patient has had one epidural steroid injection within the last six months. If the patient has had two or more epidural steroid injections in the past six months and the previous injection resulted in a 50% improvement of symptoms for three months, another injection may be considered.<sup>9-23</sup>
- **Recommended Clinical Approach**<sup>1-2</sup>: Perform epidural steroid injections with radiographic image guidance. One interlaminar injection is recommended at a time. Up to two transforaminal injections may be appropriate at a time bilaterally (at the same nerve level) or unilaterally at adjacent levels.
- Exclusions: None.

#### **Medical Necessity Criteria**

#### Indications

- → Epidural steroid injections (ESI) are considered appropriate if ALL of the following are TRUE<sup>1,24</sup>:
  - The patient has ANY positive findings from the <u>clinical</u> <u>presentation</u> and <u>typical physical exam findings</u> lists.
  - Advanced imaging corresponds to clinical presentation and shows nerve impingement.
  - The patient fails to show significant improvement in pain or disability level due to symptoms, despite receiving conservative care for more than 6 weeks, or the patient cannot complete conservative care due to the severity of symptoms. Conservative care is a combination of either physical therapy or provider-directed home exercise program AND medications, anti-inflammatories, or oral steroids.
  - The patient is outside the acute period (greater than 4 weeks).
  - The patient has had fewer than 3 epidural steroid injections per region within the past 6 months with at least 3 weeks in between injections, at which time the patient had 50% improvement of symptoms.

**Non-Indications** 

- → Epidural steroid injections may not be indicated if ANY of the following is TRUE<sup>14</sup>:
  - Hypersensitivity (or allergy) to steroids.
  - Local or systemic infection.
  - Coagulopathy or recent use of blood-thinning agents.
  - Uncontrolled diabetes.
  - The patient has **ANY** neurologic signs or symptoms:
    - Progressive neurological deficits.
    - Unsteady gait/balance or generalized lower extremity weakness.
    - Hyperreflexia.
    - Positive Babinski or clonus.
    - Bowel or bladder incontinence.
    - Saddle anesthesia.

## Site of Service Criteria

Outpatient

HCPCS Code	Code Description/Definition
62322	Injection of substance into lumbar spinal canal; Insertion of catheter and injection of substance into lumbar interlaminar epidural space;
62323	Injection of substance into lumbar spinal canal using imaging guidance; Insertion of catheter and injection of substance into lumbar interlaminar epidural space using imaging guidance; Insertion of catheter and injection of substance into lumbar interlaminar subarachnoid space using imaging guidance; Insertion of needle and injection of substance into lumbar interlaminar epidural space using imaging guidance; Insertion of needle and injection of substance into lumbar interlaminar subarachnoid space using imaging guidance
64483	Transforaminal injection of anesthetic agent and steroid into epidural space of lumbar spine using CT guidance; Transforaminal injection of anesthetic agent and steroid into epidural space of lumbar spine using fluoroscopic

	guidance; Transforaminal injection of anesthetic agent and steroid into epidural space of lumbar spine using imaging guidance; Transforaminal injection of anesthetic agent into epidural space of lumbar spine using CT guidance; Transforaminal injection of anesthetic agent into epidural space of lumbar spine using fluoroscopic guidance; Transforaminal injection of anesthetic agent into epidural space of lumbar spine using imaging guidance; Transforaminal injection of steroid into epidural space of lumbar spine using CT guidance; Transforaminal injection of steroid into epidural space of lumbar spine using CT guidance; Transforaminal injection of steroid into epidural space of lumbar spine using fluoroscopic guidance; Transforaminal injection of steroid into epidural space of lumbar spine using fluoroscopic guidance; Transforaminal injection of steroid into epidural space of lumbar spine guidance
64484	Transforaminal injection of anesthetic agent and steroid into epidural space of lumbar spine using CT guidance; Transforaminal injection of anesthetic agent and steroid into epidural space of lumbar spine using fluoroscopic guidance; Transforaminal injection of anesthetic agent and steroid into epidural space of lumbar spine using imaging guidance; Transforaminal injection of anesthetic agent into epidural space of lumbar spine using CT guidance; Transforaminal injection of anesthetic agent into epidural space of lumbar spine using fluoroscopic guidance; Transforaminal injection of anesthetic agent into epidural space of lumbar spine using fluoroscopic guidance; Transforaminal injection of anesthetic agent into epidural space of lumbar spine using imaging guidance; Transforaminal injection of steroid into epidural space of lumbar spine using CT guidance; Transforaminal injection of steroid into epidural space of lumbar spine using fluoroscopic guidance; Transforaminal injection of steroid into epidural space of lumbar spine using fluoroscopic guidance; Transforaminal injection of steroid into epidural space of lumbar spine using into epidural space of lumbar spine using imaging guidance
0230T	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with ultrasound guidance, lumbar or sacral; single level
023IT	Injections of anesthetic agent and/or steroid into lower or sacral spinal canal using ultrasound guidance
64999	Nervous system procedure
76000	Imaging guidance for procedure, up to 1 hour

# Surgical Management

## Service: Lumbar Decompression without Fusion

#### **General Guidelines**

- Units, Frequency, & Duration: None.
- Criteria for Subsequent Requests: None.
- **Recommended Clinical Approach**<sup>1</sup>: Surgical decompression without fusion is appropriate for patients with moderate to severe symptoms that continue or progress despite non-surgical treatment.
- Exclusions: None.

#### **Medical Necessity Criteria**

Indications

- → Lumbar decompression without fusion is considered appropriate if ANY of the following is TRUE<sup>1</sup>:
  - The patient has signs or symptoms of cauda equina syndrome or myelopathy and ALL of the following:
    - Magnetic resonance imaging (MRI) reveals compressive pathology.
    - **ANY** of the following symptoms of nerve compression:
      - Bowel, bladder, and erectile dysfunction
      - Diffuse motor weakness
      - Saddle-distribution anesthesia
  - The patient has **ALL** of the following:
    - The patient has **ANY** positive findings from the <u>clinical</u> <u>presentation</u> and <u>typical physical exam findings</u> lists.
    - MRI reveals compressive pathology.
    - **ANY** of the following:
      - The patient fails to show significant improvement in pain or disability level due to symptoms, despite receiving non-surgical management interventions for more than 6 weeks. Non-surgical management includes a combination of physical therapy, provider-directed home exercise program, facet injections/medial branch blocks (MBBB), epidural steroid injections (ESI), and anti-inflammatory medications, pain management, or oral steroids.
      - The patient's severe pain or disability is affecting their quality of life and limiting their daily life (including working and ability to provide self care).

• The patient has progressive neurological motor deficits.

Non-Indications None.

## Site of Service Criteria

## Inpatient or outpatient

HCPCS Code	Code Description/Definition
63012	Laminectomy of lumbar spine with removal of abnormal facet and decompression of cauda equina and nerve root; Laminectomy of lumbar spine with removal of abnormal facet and pars inter-articularis and decompression of cauda equina and nerve root; Laminectomy of lumbar spine with removal of abnormal pars inter-articularis and decompression of cauda equina and nerve root
63017	Laminectomy of lumbar spine with decompression of cauda equina; Laminectomy of lumbar spine with decompression of spinal cord; Laminectomy of lumbar spine with decompression of spinal cord and cauda equina; Laminectomy of lumbar spine with exploration of cauda equina; Laminectomy of lumbar spine with exploration of spinal cord; Laminectomy of lumbar spine with exploration of spinal cord and cauda equina
63030	Hemilaminectomy and foraminotomy of lumbar spine with decompression of nerve root; Hemilaminectomy and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and partial facetectomy of lumbar spine with decompression of nerve root; Hemilaminectomy and partial facetectomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of lumbar spine with decompression of nerve root; Hemilaminectomy of lumbar spine with excision of nerve root; Hemilaminectomy of lumbar spine with decompression of nerve root; Hemilaminectomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of lumbar spine with decompression of

	nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root
63035	Hemilaminectomy and foraminotomy of lumbar spine with decompression of nerve root; Hemilaminectomy and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and partial facetectomy of lumbar spine with decompression of nerve root; Hemilaminectomy and partial facetectomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of lumbar spine with decompression of nerve root; Hemilaminectomy of lumbar spine with excision of nerve root; Hemilaminectomy of lumbar spine with decompression of nerve root; Hemilaminectomy of lumbar spine with excision of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of lumbar spine with decompression of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of lumbar spine with excision of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root;
63042	Hemilaminectomy and foraminotomy of lumbar spine with decompression of nerve root; Hemilaminectomy and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and partial facetectomy of lumbar spine with decompression of nerve root; Hemilaminectomy and partial facetectomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of lumbar spine with decompression of nerve root; Hemilaminectomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of lumbar spine with partial facetectomy, foraminotomy, and decompression of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and foraminotomy of single interspace of lumbar spine with decompression of nerve root; Hemilaminectomy and foraminotomy of single interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and foraminotomy of single interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and partial facetectomy of single interspace of lumbar

	spine with decompression of nerve root; Hemilaminectomy and partial facetectomy of single interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of single interspace of lumbar spine with decompression of nerve root; Hemilaminectomy of single interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of single interspace of lumbar spine with partial facetectomy, foraminotomy, and decompression of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of single interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root
63044	Hemilaminectomy and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and partial facetectomy of lumbar spine with decompression of nerve root; Hemilaminectomy and partial facetectomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of lumbar spine with decompression of nerve root; Hemilaminectomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of lumbar spine with partial facetectomy, foraminotomy, and decompression of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and foraminotomy of additional interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and foraminotomy of additional interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy and partial facetectomy of additional interspace of lumbar spine with decompression of nerve root; Hemilaminectomy and partial facetectomy of additional interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of additional interspace of lumbar spine with decompression of nerve root; Hemilaminectomy of additional interspace of lumbar spine with decompression of nerve root; Hemilaminectomy of additional interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root; Hemilaminectomy of additional interspace of lumbar spine with partial

	facetectomy, foraminotomy, and decompression of nerve root; Hemilaminectomy, partial facetectomy, and foraminotomy of additional interspace of lumbar spine with excision of herniated intervertebral disc and decompression of nerve root
63047	Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of cauda equina; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of cauda equina; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of cauda equina and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of cauda equina and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of spinal cord and nerve root
63048	Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord and nerve root
63057	Decompression of lumbar cauda equina and nerve root by transpedicular approach; Decompression of lumbar

	cauda equina by transpedicular approach; Decompression of lumbar nerve root by transpedicular approach; Decompression of lumbar spinal cord and nerve root by transpedicular approach; Decompression of lumbar spinal cord by transpedicular approach; Decompression of lumbar spinal cord, cauda equina, and nerve root by transpedicular approach; Decompression of lumbar cauda equina and nerve root in additional vertebra by transpedicular approach; Decompression of lumbar cauda equina in additional vertebra by transpedicular approach; Decompression of lumbar cauda equina in additional vertebra by transpedicular approach; Decompression of lumbar nerve root in additional vertebra by transpedicular approach; Decompression of lumbar spinal cord and nerve root in additional vertebra by transpedicular approach; Decompression of lumbar spinal cord in additional vertebra by transpedicular approach;
63056	Decompression of lumbar cauda equina and nerve root by lateral extraforaminal approach; Decompression of lumbar cauda equina and nerve root by transfacet approach; Decompression of lumbar cauda equina and nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina and nerve root in single vertebra by transfacet approach; Decompression of lumbar cauda equina by lateral extraforaminal approach; Decompression of lumbar cauda equina by transfacet approach; Decompression of lumbar cauda equina in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by transfacet approach; Decompression of lumbar nerve root by lateral extraforaminal approach; Decompression of lumbar nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar nerve root by transfacet approach; Decompression of lumbar spinal cord and cauda equina by lateral extraforaminal approach; Decompression of lumbar spinal cord and cauda equina by lateral extraforaminal approach; Decompression of lumbar spinal cord and cauda equina by transfacet approach; Decompression of lumbar spinal cord and nerve root by lateral extraforaminal approach; Decompression of lumbar spinal cord and nerve root by transfacet approach; Decompression of lumbar spinal cord by lateral extraforaminal approach; Decompression of lumbar spinal cord and nerve root by transfacet approach; Decompression of lumbar spinal cord by lateral extraforaminal approach; Decompression of

C9757	nerve root(s), including partial facetectomy, foraminotomy and excision of herniated intervertebral disc, and repair of annular defect with implantation of bone anchored annular closure device, including annular defect measurement, alignment and sizing assessment, and image guidance; 1 interspace, lumbar
S2348	pulposus of intervertebral disc, using radiofrequency energy, single or multiple levels, lumbar Laminotomy (hemilaminectomy), with decompression of
63011	Laminectomy sacral with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments Decompression procedure, percutaneous, of nucleus
63005	Laminectomy lumbar with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments
62380	Endoscopic decompression of lumbar nerve root; Endoscopic decompression of lumbar spinal cord; Endoscopic decompression of lumbar spinal cord and nerve root
	lumbar spinal cord by transfacet approach; Decompression of lumbar spinal cord in single vertebra by lateral extraforaminal approach; Decompression of lumbar spinal cord in single vertebra by transfacet approach; Decompression of lumbar spinal cord, cauda equina, and nerve root by transfacet approach

# Service: Single-Level Lumbar Fusion (with or without Decompression)

<u>General Guidelines</u>

- Units, Frequency, & Duration: None.
- Criteria for Subsequent Requests: None.
- **Recommended Clinical Approach**<sup>1</sup>: Lumbar fusion for central canal or neural foraminal stenosis is appropriate for patients with moderate to severe symptoms that continue or progress despite non-surgical treatment with evidence of (or creation of) an unstable spine.
- Exclusions: None.

## Medical Necessity Criteria

Indications

- → Lumbar fusion with/without decompression is considered appropriate if there is radiographic evidence of instability or iatrogenic instability caused by the decompression and ANY of the following is TRUE<sup>1</sup>:
  - The patient has signs or symptoms of a potential cauda equina syndrome and ALL of the following:
    - MRI reveals compressive pathology.
    - **ANY** of the following symptoms:
      - Bowel, bladder, and erectile dysfunction
      - Diffuse motor weakness
      - Saddle-distribution anesthesia
  - The patient has **ALL** of the following:
    - Patient has **ANY** positive findings from the <u>clinical</u> <u>presentation</u> and <u>typical physical exam findings</u> lists.
    - MRI reveals compressive pathology.
    - One of the following:
      - The patient fails to show significant improvement in pain or disability level due to symptoms, despite receiving non-surgical management for more than 6 weeks.
      - The patient has severe pain or disability affecting their quality of life and limiting their daily life (including working and unable to provide self care).
      - The patient has progressive neurological motor deficits.

Non-Indications

# Site of Service Criteria

Inpatient or outpatient

# Procedure Codes (HCPCS/CPT)

Decompression without fusion codes: 63012,63017,63030,63035,63042,63044, 63047, 63048, 63056, 63057, 63080

## The following codes are add-on CPT codes for fusion:

HCPCS Code	Code Description/Definition
22533	Arthrodesis of lumbar vertebra with minimal discectomy; Arthrodesis of lumbar vertebra by lateral extracavitary technique with minimal discectomy
22558	Arthrodesis by anterior interbody technique of lumbar region with discectomy; Arthrodesis by anterior interbody technique of lumbar region, with minimal discectomy
22612	Arthrodesis of lumbar vertebral segment by posterior and lateral transverse technique; Arthrodesis of lumbar vertebral segment by posterior technique; Arthrodesis of lumbar vertebral segment by posterolateral and lateral transverse technique; Arthrodesis of lumbar vertebral segment by posterolateral technique
22630	Arthrodesis of lumbar vertebral segment by posterior interbody technique with discectomy; Arthrodesis of lumbar vertebral segment by posterior interbody technique with laminectomy; Arthrodesis of lumbar vertebral segment by posterior interbody technique with laminectomy and discectomy; Arthrodesis of single lumbar vertebral interspace by posterior interbody technique with discectomy; Arthrodesis of single lumbar vertebral interspace by posterior interbody technique with discectomy; Arthrodesis of single lumbar vertebral interspace by posterior interbody technique with laminectomy; Arthrodesis of single lumbar vertebral interspace by posterior interbody technique with laminectomy and discectomy
22633	Arthrodesis of single lumbar vertebral interspace by combined posterior technique and posterior interbody technique, with discectomy; Arthrodesis of single lumbar vertebral interspace by combined posterior technique and posterior interbody technique, with laminectomy;

	T P
	Arthrodesis of single lumbar vertebral interspace by combined posterior technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of single lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with discectomy; Arthrodesis of single lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with laminectomy; Arthrodesis of single lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with laminectomy; Arthrodesis of single lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of single lumbar vertebral segment by combined posterior technique and posterior interbody technique, with laminectomy; Arthrodesis of single lumbar vertebral segment by combined posterior technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of single lumbar vertebral segment by combined posterior technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of single lumbar vertebral segment by combined posterolateral technique and posterior interbody technique, with discectomy
22840	Posterior non segmental instrumentation
22845	Anterior Instrumentation 2-3 vertebral segments
22853	Insertion of biomechanical interbody device with arthrodesis
22854	Insertion of biomechanical device with corpectomy defect w/ arthrodesis
63012	Laminectomy of lumbar spine with removal of abnormal facet and decompression of cauda equina and nerve root; Laminectomy of lumbar spine with removal of abnormal facet and pars inter-articularis and decompression of cauda equina and nerve root; Laminectomy of lumbar spine with removal of abnormal pars inter-articularis and decompression of cauda equina and nerve root
63017	Laminectomy of lumbar spine with decompression of cauda equina; Laminectomy of lumbar spine with decompression of spinal cord; Laminectomy of lumbar spine with decompression of spinal cord and cauda equina; Laminectomy of lumbar spine with exploration of cauda equina; Laminectomy of lumbar spine with exploration of spinal cord; Laminectomy of lumbar spine

	with exploration of spinal cord and cauda equina
63047	Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of cauda equina; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of cauda equina; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of cauda equina and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy, and foraminotomy of single vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of spinal cord and nerve root
63048	Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord and nerve root
+63052	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; single vertebral segment (List separately in addition to code for primary procedure)

+63053	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; each additional vertebral segment (List separately in addition to code for primary procedure)
63057	Decompression of lumbar cauda equina and nerve root by transpedicular approach; Decompression of lumbar cauda equina by transpedicular approach; Decompression of lumbar nerve root by transpedicular approach; Decompression of lumbar spinal cord and nerve root by transpedicular approach; Decompression of lumbar spinal cord by transpedicular approach; Decompression of lumbar spinal cord, cauda equina, and nerve root by transpedicular approach; Decompression of lumbar cauda equina and nerve root in additional vertebra by transpedicular approach; Decompression of lumbar cauda equina in additional vertebra by transpedicular approach; Decompression of lumbar cauda equina in additional vertebra by transpedicular approach; Decompression of lumbar nerve root in additional vertebra by transpedicular approach; Decompression of lumbar spinal cord and nerve root in additional vertebra by transpedicular approach; Decompression of lumbar spinal cord in additional vertebra by transpedicular approach;
63056	Decompression of lumbar cauda equina and nerve root by lateral extraforaminal approach; Decompression of lumbar cauda equina and nerve root by transfacet approach; Decompression of lumbar cauda equina and nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina and nerve root in single vertebra by transfacet approach; Decompression of lumbar cauda equina by lateral extraforaminal approach; Decompression of lumbar cauda equina by transfacet approach; Decompression of lumbar cauda equina in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by transfacet approach; Decompression of lumbar nerve root by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by transfacet approach; Decompression of lumbar nerve root by lateral extraforaminal approach; Decompression of lumbar nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar nerve root by transfacet approach; Decompression of lumbar nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar nerve root by transfacet approach; Decompression of lumbar

	lumbar spinal cord and cauda equina by lateral extraforaminal approach; Decompression of lumbar spinal cord and cauda equina by transfacet approach; Decompression of lumbar spinal cord and nerve root by lateral extraforaminal approach; Decompression of lumbar spinal cord and nerve root by transfacet approach; Decompression of lumbar spinal cord by lateral extraforaminal approach; Decompression of lumbar spinal cord by transfacet approach; Decompression of lumbar spinal cord in single vertebra by lateral extraforaminal approach; Decompression of lumbar spinal cord in single vertebra by transfacet approach; Decompression of lumbar spinal cord in single vertebra by lateral extraforaminal approach; Decompression of lumbar spinal cord in single vertebra by transfacet approach; Decompression of lumbar spinal cord, cauda equina, and nerve root by transfacet approach
62380	Endoscopic decompression of lumbar nerve root; Endoscopic decompression of lumbar spinal cord; Endoscopic decompression of lumbar spinal cord and nerve root
63005	Laminectomy lumbar with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments
63011	Laminectomy sacral with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments
S2348	Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, using radiofrequency energy, single or multiple levels, lumbar

# Service: Multi-Level Lumbar Fusion (with or without Decompression)

<u>General Guidelines</u>

- Units, Frequency, & Duration: None.
- Criteria for Subsequent Requests: None.
- **Recommended Clinical Approach**<sup>1</sup>: Lumbar fusion for central canal or neuroforaminal stenosis is appropriate for patients with moderate to severe symptoms that continue or progress despite nonsurgical treatment with evidence of (or creation of) an unstable spine.
- Exclusions: None.

## Medical Necessity Criteria

Indications

- → Multi-level lumbar fusion, with/without decompression is considered appropriate if there is radiographic evidence of instability or iatrogenic instability caused by or potentially caused by the decompression at each level planned for surgery and ANY of the following is TRUE<sup>1</sup>:
  - The patient has signs or symptoms of a cauda equina syndrome and ALL of the following:
    - MRI reveals compressive pathology
    - **ANY** symptoms of nerve compression:
      - Bowel, bladder, and erectile dysfunction
      - Diffuse motor weakness
      - Saddle-distribution anesthesia
  - The patient has **ALL** of the following:
    - The patient has **ANY** positive findings from the <u>clinical</u> <u>presentation</u> and <u>typical physical exam findings</u> lists.
    - MRI reveals compressive pathology.
    - ANY of the following is TRUE:
      - The patient fails to show significant improvement in pain or disability level due to symptoms, despite receiving non-surgical management for more than 6 weeks.
      - The patient has severe pain or disability affecting their quality of life and limiting their daily life (including working and unable to provide self care).
      - The patient has progressive neurological motor deficits.

Non-Indications None.

# Site of Service Criteria

Inpatient or outpatient

# Procedure Codes (HCPCS/CPT)

Decompression without fusion codes: 63012,63017,63030,63035,63042,63044, 63047, 63048, 63056, 63057, 63080

The following codes are add-on CPT codes for fusion:

HCPCS Code	Code Description/Definition
22533	Arthrodesis of lumbar vertebra with minimal discectomy; Arthrodesis of lumbar vertebra by lateral extracavitary technique with minimal discectomy
+22534	Arthrodesis of lumbar vertebra with minimal discectomy; Arthrodesis of lumbar vertebra with minimal discectomy
22558	Arthrodesis by anterior interbody technique of lumbar region with discectomy; Arthrodesis by anterior interbody technique of lumbar region, with minimal discectomy
+22585	Arthrodesis by anterior interbody technique of vertebral region with discectomy; Arthrodesis by anterior interbody technique of each additional interspace, with minimal discectomy
22612	Arthrodesis of lumbar vertebral segment by posterior and lateral transverse technique; Arthrodesis of lumbar vertebral segment by posterior technique; Arthrodesis of lumbar vertebral segment by posterolateral and lateral transverse technique; Arthrodesis of lumbar vertebral segment by posterolateral technique
+22614	Arthrodesis of each additional vertebral segment of single level by posterior technique; Arthrodesis of each additional vertebral segment of single level by posterolateral technique; Arthrodesis of vertebral segment by posterior technique; Arthrodesis of vertebral segment by posterolateral technique
22630	Arthrodesis of lumbar vertebral segment by posterior interbody technique with discectomy; Arthrodesis of lumbar vertebral segment by posterior interbody technique with laminectomy; Arthrodesis of lumbar

	vertebral segment by posterior interbody technique with laminectomy and discectomy; Arthrodesis of single lumbar vertebral interspace by posterior interbody technique with discectomy; Arthrodesis of single lumbar vertebral interspace by posterior interbody technique with laminectomy; Arthrodesis of single lumbar vertebral interspace by posterior interbody technique with laminectomy and discectomy
+22632	Arthrodesis of each additional vertebral interspace by posterior interbody technique with discectomy; Arthrodesis of each additional vertebral interspace by posterior interbody technique with laminectomy; Arthrodesis of each additional vertebral interspace by posterior interbody technique with laminectomy and discectomy; Arthrodesis of lumbar vertebral segment by posterior interbody technique with discectomy; Arthrodesis of lumbar vertebral segment by posterior interbody technique with discectomy; Arthrodesis of lumbar vertebral segment by posterior interbody technique with laminectomy; Arthrodesis of lumbar vertebral segment by posterior interbody technique with laminectomy and discectomy
22633	Arthrodesis of single lumbar vertebral interspace by combined posterior technique and posterior interbody technique, with discectomy; Arthrodesis of single lumbar vertebral interspace by combined posterior technique and posterior interbody technique, with laminectomy; Arthrodesis of single lumbar vertebral interspace by combined posterior technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of single lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with discectomy; Arthrodesis of single lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with discectomy; Arthrodesis of single lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with laminectomy; Arthrodesis of single lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of single lumbar vertebral segment by combined posterior technique and posterior interbody technique, with laminectomy; Arthrodesis of single lumbar vertebral segment by combined posterior technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of single lumbar vertebral segment by combined posterior

	technique and posterior interbody technique, with discectomy
+22634	Arthrodesis by combined technique of lumbar vertebral segment with discectomy; Arthrodesis by combined technique of lumbar vertebral segment with laminectomy; Arthrodesis by combined technique of lumbar vertebral segment with laminectomy and discectomy; Arthrodesis of each additional lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with discectomy; Arthrodesis of each additional lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with laminectomy; Arthrodesis of each additional lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with laminectomy; Arthrodesis of each additional lumbar vertebral interspace by combined posterolateral technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of each additional lumbar vertebral segment by combined posterior technique and posterior interbody technique, with discectomy; Arthrodesis of each additional lumbar vertebral segment by combined posterior technique and posterior interbody technique, with laminectomy; Arthrodesis of each additional lumbar vertebral segment by combined posterior technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of each additional lumbar vertebral segment by combined posterior technique and posterior interbody technique, with laminectomy and discectomy; Arthrodesis of each additional lumbar vertebral segment by combined posterolateral technique and posterior interbody technique, with discectomy; Arthrodesis of each additional lumbar vertebral segment by combined posterolateral technique and posterior interbody technique, with laminectomy; Arthrodesis of each additional lumbar vertebral segment by combined posterolateral technique and posterior interbody technique, with laminectomy and discectomy;
22840	Posterior non segmental instrumentation
	Posterior segmental instrumentation 3-6 vertebral
22842	segments
	Posterior segmental instrumentation 7-12_vertebral
22843	segments
	Posterior segmental instrumentation >/13 vertebral
22844	segments
22845	Anterior Instrumentation 2-3 vertebral segments

22846	Anterior Instrumentation 4-7 vertebral segments
22847	Anterior Instrumentation >/8 vertebral segments
22853	Insertion of biomechanical interbody device with arthrodesis
22854	Insertion of biomechanical device with corpectomy defect w/ arthrodesis
63012	Laminectomy of lumbar spine with removal of abnormal facet and decompression of cauda equina and nerve root; Laminectomy of lumbar spine with removal of abnormal facet and pars inter-articularis and decompression of cauda equina and nerve root; Laminectomy of lumbar spine with removal of abnormal pars inter-articularis and decompression of cauda equina and nerve root
63017	Laminectomy of lumbar spine with decompression of cauda equina; Laminectomy of lumbar spine with decompression of spinal cord; Laminectomy of lumbar spine with decompression of spinal cord and cauda equina; Laminectomy of lumbar spine with exploration of cauda equina; Laminectomy of lumbar spine with exploration of spinal cord; Laminectomy of lumbar spine with exploration of spinal cord and cauda equina
63047	Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of cauda equina; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of cauda equina; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of cauda equina and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of cauda equina and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of single vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy

	of single vertebra of lumbar aning with decompression of
	of single vertebra of lumbar spine with decompression of spinal cord and nerve root
63048	Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of lumbar spine with decompression of spinal cord and nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of nerve root; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord; Unilateral laminectomy, facetectomy, and foraminotomy of additional vertebra of lumbar spine with decompression of spinal cord and nerve root
+63052	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; single vertebral segment (List separately in addition to code for primary procedure)
+63053	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; each additional vertebral segment (List separately in addition to code for primary procedure)
63057	Decompression of lumbar cauda equina and nerve root by transpedicular approach; Decompression of lumbar cauda equina by transpedicular approach; Decompression of lumbar nerve root by transpedicular approach; Decompression of lumbar spinal cord and nerve root by transpedicular approach; Decompression of lumbar spinal cord by transpedicular approach; Decompression of lumbar spinal cord, cauda equina, and nerve root by transpedicular approach; Decompression of lumbar cauda equina and nerve root in additional vertebra by transpedicular approach; Decompression of lumbar cauda equina in additional vertebra by transpedicular approach; Decompression of

	root in additional vertebra by transpedicular approach; Decompression of lumbar spinal cord and nerve root in additional vertebra by transpedicular approach; Decompression of lumbar spinal cord in additional vertebra by transpedicular approach
63056	Decompression of lumbar cauda equina and nerve root by lateral extraforaminal approach; Decompression of lumbar cauda equina and nerve root by transfacet approach; Decompression of lumbar cauda equina and nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina and nerve root in single vertebra by transfacet approach; Decompression of lumbar cauda equina by lateral extraforaminal approach; Decompression of lumbar cauda equina by transfacet approach; Decompression of lumbar cauda equina in single vertebra by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by transfacet approach; Decompression of lumbar nerve root by lateral extraforaminal approach; Decompression of lumbar cauda equina in single vertebra by transfacet approach; Decompression of lumbar nerve root by lateral extraforaminal approach; Decompression of lumbar nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar nerve root by transfacet approach; Decompression of lumbar nerve root in single vertebra by lateral extraforaminal approach; Decompression of lumbar nerve spinal cord and cauda equina by lateral extraforaminal approach; Decompression of lumbar spinal cord and cauda equina by lateral extraforaminal approach; Decompression of lumbar spinal cord and nerve root by transfacet approach; Decompression of lumbar spinal cord and nerve root by transfacet approach; Decompression of lumbar spinal cord and nerve root by transfacet approach; Decompression of lumbar spinal cord by transfacet approach; Decompression of lumbar spinal cord by lateral extraforaminal approach; Decompression of lumbar spinal cord in single vertebra by lateral extraforaminal approach; Decompression of lumbar spinal cord in single vertebra by transfacet approach; Decompression of lumbar spinal cord, cauda equina, and nerve root by transfacet approach
62380	Endoscopic decompression of lumbar nerve root; Endoscopic decompression of lumbar spinal cord; Endoscopic decompression of lumbar spinal cord and nerve root

	Laminectomy lumbar with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg,
63005	spinal stenosis), 1 or 2 vertebral segments
	Laminectomy sacral with exploration and/or
	decompression of spinal cord and/or cauda equina,
	without facetectomy, foraminotomy or discectomy (eg,
63011	spinal stenosis), 1 or 2 vertebral segments
	Decompression procedure, percutaneous, of nucleus
	pulposus of intervertebral disc, using radiofrequency
S2348	energy, single or multiple levels, lumbar

# Service: Interspinous/Interlaminar Spacer Implantation

### **General Guidelines**

- Units, Frequency, & Duration: None.
- Criteria for Subsequent Requests: None.
- **Recommended Clinical Approach**<sup>1</sup>: There is insufficient evidence to recommend for or against interspinous spacer implantation.
- **Exclusions:** None.

### Medical Necessity Criteria

Indications

- → Interspinous/interlaminar spacer implantation is considered appropriate if ALL of the following is TRUE<sup>125</sup>:
  - The patient has ANY positive findings from the <u>clinical</u> <u>presentation</u> and <u>typical physical exam findings</u> lists.
  - MRI reveals compressive pathology.
  - **ANY** of the following:
    - The patient fails to show significant improvement in pain or disability level due to symptoms, despite receiving non-surgical management for more than 6 weeks.
    - The patient has severe pain or disability affecting their quality of life and limiting their daily life (including working and inability to provide self care).
    - The patient has progressive neurological motor deficits.

### **Non-Indications**

→ Interspinous/interlaminar spacer implantation is not considered appropriate if ANY of the following is TRUE<sup>25</sup>:

- Cauda equina syndrome
- Severe degenerative spinal stenosis
- Spinal stenosis caused by disc herniations
- Anatomy preventing device implantation such as:
  - Greater than grade 1 spondylolisthesis or isthmic spondylolisthesis
  - Fracture of spinous process, pars interarticularis, or laminae
  - Scoliosis
  - Prior lumbar fusion at the index level
- ♦ Active infection

#### Site of Service Criteria

Inpatient or outpatient

HCPCS Code	Code Description/Definition
22867	Insertion of interspinous process distraction device into a single level of lumbar spine using imaging guidance, with open decompression; Insertion of interspinous process distraction device into a single level of lumbar spine with open decompression; Insertion of interspinous process stabilization device into a single level of lumbar spine using imaging guidance, with open decompression; Insertion of interspinous process stabilization device into a single level of lumbar spine with open decompression
22868	Insertion of interspinous distraction device into additional level of lumbar spine using imaging guidance, with open decompression; Insertion of interspinous distraction device into additional level of lumbar spine with open decompression; Insertion of interspinous stabilization device into additional level of lumbar spine using imaging guidance, with open decompression; Insertion of interspinous stabilization device into additional level of lumbar spine with open decompression; Insertion of lumbar spine with open
22869	Insertion of interspinous distraction device into a single level of lumbar spine; Insertion of interspinous distraction device into a single level of lumbar spine using imaging guidance
22870	Insertion of interspinous distraction device into second

	level of lumbar spine; Insertion of interspinous distraction device into second level of lumbar spine using imaging guidance
22859	Insertion of biomechanical interbody device w/o arthrodesis

# Surgical Risk Factors

## Patient Medical Risk Stratification

Patient Risk Score	Patient Characteristic	Min Range	Max Range	Guidance
1- Very Low Risk	No known medical problems			
2- Low Risk	Hypertension		180/110 mm Hg	
2- Low Risk	Asthma	peak flow >80% of predicted or personal best value		
2- Low Risk	Prior history of alcohol abuse			Screen for liver disease and malnutrition
2- Low Risk	Prior history of tobacco use			
3- Intermediate Risk	Asthma	peak flow <80% of predicted or personal best value		
3- Intermediate Risk	Active alcohol abuse			
3- Intermediate Risk	Age	65	75	
3- Intermediate Risk	History of treated, stable coronary artery disease (CAD)			
3- Intermediate Risk	Stable atrial fibrillation			
3- Intermediate Risk	Diabetes mellitus	HbA1C >7%		
3- Intermediate Risk	Morbid obesity	вмі 30	BMI 40	
3- Intermediate Risk	Anemia	hemoglobin <11 (females), <12 (males)		Workup to identify etiology
3- Intermediate Risk	HIV	CD4 <200 cells/mm3		Get clearance from HIV specialist

3- Intermediate Risk	Dhoumantalania diagona			Preoperative consultation with rheumatologist re: perioperative medication
RISK	Rheumatologic disease			management
		ankle-brachi		
		al pressure		
3- Intermediate	Peripheral vascular disease or history			Preoperative consultation with
Risk	of peripheral vascular bypass	<0.9		vascular surgeon
3- Intermediate Risk	History of venous thromboembolism (VTE)			
3- Intermediate	Well-controlled obstructive sleep			
Risk	apnea			
3- Intermediate Risk		transferrin <200 mg/dL albumin <3.5 g/dL prealbumin <22.5 mg/dL total lymphocyte count <1200-1500 cell/mm3 BMI <18		Preoperative consultation with nutritionist
3- Intermediate Risk	Active tobacco Use			Enroll patient in smoking cessation program
4- High Risk	Diabetes mellitus with complications	HbA1c >8%		
4- High Risk	Age	76	85	
4- High Risk	Oxygen dependent pulmonary disease			
4- High Risk	Sickle cell anemia		1	
4- High Risk	Obesity	ВМІ 40		
4- High Risk	Cirrhosis, history of hepatic decompensation or variceal bleeding			

4- High Risk	Impaired cognition; dementia			
4- High Risk	Compensated CHF			
4- High Risk	Cerebrovascular disease			
	Uncontrolled or suspected			
4- High Risk	obstructive sleep apnea (OSA)			
		serum		
		creatinine		
		>1.5 mg/dL or		
		creatinine		
		clearance		
4- High Risk	Renal insufficiency	<100 mL/min		
4- High Risk	Opioid dependence			
4- High Risk	End Stage Liver Disease			
4- High Risk	Uncontrolled Seizure Disorder			
4- High Risk	History of Malignant Hyperthermia			
	Cardiovascular: unstable angina,			
	recent myocardial infarction (60			
	days), uncontrolled atrial fibrillation			
	or other high-grade abnormal			
	rhythm, severe valvular disease,			
5- Very High Risk	decompensated heart failure			
				Preoperative consultation with
5- Very High Risk	Primary pulmonary hypertension			pulmonologist warranted
	Cirrhosis or severe liver disease,			
	history of hepatic decompensation			
5- Very High Risk	or variceal bleeding			
	Severe frailty, dependence for ADLs,			
	or history of 3 or more falls in last 6			
5- Very High Risk	mos			
5- Very High Risk	Obesity		BMI >50	
5- Very High Risk	Age		>85	
	-	•	•	

	History of VTE with CI to anticoagulation, failure of anticoagulation, cessation of anticoagulation therapy secondary		Preoperative consultation with
5- Very High Risk	to bleeding		hematologist or internist
5- Very High Risk	Renal failure requiring dialysis		
5- Very High Risk	Immunosuppression		
5- Very High Risk	Chronic Pain		

# Postoperative Care

## Service: Physical Therapy

#### **General Guidelines**

- Units, Frequency, & Duration: Prescribe for 4-6 weeks after lumbar fusion surgery. Education and activity supervision may begin immediately, whereas formal spine rehabilitation may begin later, in the case of spinal fusion to allow fusion healing (approximately 8-12 weeks). Rehabilitation may be appropriate up to 6 months after fusion.
- **Criteria for Subsequent Requests:** The patient should be progressing towards goals in the physical therapy plan without fully obtaining all goals.
- Recommended Clinical Approach: None.
- Exclusions: None.

#### **Medical Necessity Criteria**

Indications

- → Post-acute physical therapy is considered appropriate IF ANY of the following is TRUE<sup>26</sup>:
  - The patient underwent surgery.

Non-Indications

None.

Site of Service Criteria

Outpatient

HCPCS Code	Code Description/Definition
97010	Application of hot or cold packs
97012	Application of mechanical traction
97014	Application of electrical stimulation
97016	Application of vasopneumatic devices
97018	Application of paraffin bath

97022	Application of whirlpool
97024	Application of diathermy
97026	Application of infrared modality
97028	Application of ultraviolet modality
97032	Application of manual electrical stimulation
97033	Application of iontophoresis
97034	Application of contrast baths
97035	Application of ultrasound modality
97036	Application of Hubbard tank
97039	Modality service
97110*	Therapeutic exercises to develop strength and endurance, range of motion and flexibility
97112	Neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and proprioception for sitting and standing activities
97113	Aquatic therapy with therapeutic exercises
97116	Gait training including stair climbing
97124	Massage including effleurage and petrissage; Massage including effleurage and tapotement; Massage including effleurage, petrissage and tapotement; Massage including petrissage and tapotement
97139	Therapeutic procedure
97140	Manual therapy techniques
97150	Group therapeutic procedures
97164	Physical therapy re-evaluation of established plan of care, high complexity, typical time with patient 20 minutes; Physical therapy re-evaluation of established plan of care, high complexity, typical time with patient and family 20 minutes; Physical therapy re-evaluation of established plan of care,

high complexity, typical time with patient's family 20 minutes
Direct therapeutic activities with use of dynamic activities to improve functional performance, each 15 minutes
Home management training, direct one-on-one contact, each 15 minutes; Self-care management training, direct one-on-one contact, each 15 minutes
Community reintegration training, direct one-on-one contact, each 15 minutes; Work reintegration training, direct one-on-one contact, each 15 minutes
Wheelchair management, each 15 minutes
Work conditioning, initial 2 hours; Work hardening, initial 2 hours
Work conditioning, each additional hour; Work hardening, each additional hour
Physical performance measurement with written report, each 15 minutes; Physical performance test with written report, each 15 minutes
Assistive technology assessment with written report, direct one-on-one contact, each 15 minutes
Initial orthotic management and training with assessment and fitting of lower extremities and trunk, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremities, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremity and trunk, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremity, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremity, each 15 minutes; Initial orthotic management and training with assessment and fitting of lower extremity, each 15 minutes; Initial orthotic management and training with assessment and fitting of trunk, each 15 minutes; Initial orthotic management and training with assessment and fitting of upper and lower extremities and trunk, each 15 minutes

	Initial prosthetic training of lower extremities, each 15 minutes;
	Initial prosthetic training of lower extremity, each 15 minutes
	Initial prosthetic training of upper and lower extremities,
	each 15 minutes;
	Initial prosthetic training of upper extremities, each 15
	minutes;
	Initial prosthetic training of upper extremity, each 15
97761	minutes
37701	
	Subsequent orthotic management and training of lower
	extremities and trunk, each 15 minutes
	Subsequent orthotic management and training of lower
	extremity and trunk, each 15 minutes
	Subsequent orthotic management and training of lower
	extremity, each 15 minutes
	Subsequent orthotic management and training of upper
	and lower extremities and trunk, each 15 minutes
	Subsequent orthotic management and training of upper
	extremities and trunk, each 15 minutes
	Subsequent orthotic management and training of upper
	extremities, each 15 minutes
	Subsequent orthotic management and training of upper
	extremity and trunk, each 15 minutes
	Subsequent orthotic management and training of upper
	extremity, each 15 minutes
	Subsequent orthotic management of lower extremities and
	trunk, each 15 minutes
	Subsequent orthotic management of lower extremity and
	trunk, each 15 minutes
	Subsequent orthotic management of lower extremity, each
	15 minutes
	Subsequent orthotic management of upper and lower
	extremities and trunk, each 15 minutes
	Subsequent orthotic management of upper extremities
	and trunk, each 15 minutes
	Subsequent orthotic management of upper extremities,
	each 15 minutes
97763	Subsequent orthotic management of upper extremity and

	trunk, each 15 minutes
	Subsequent orthotic management of upper extremity, each
	15 minutes
	Subsequent orthotic training of lower extremity, each 15
	minutes
	Subsequent orthotic training of upper and lower extremities
	and trunk, each 15 minutes
	Subsequent orthotic training of upper extremities and trunk,
	each 15 minutes
	Subsequent orthotic training of upper extremities, each 15
	minutes
	Subsequent orthotic training of upper extremity and trunk,
	each 15 minutes
	Subsequent orthotic training of upper extremity, each 15
	minutes
	Subsequent prosthetic management and training of lower
	extremities and trunk, each 15 minutes
	Subsequent prosthetic management and training of lower
	extremity and trunk, each 15 minutes
	Subsequent prosthetic management and training of lower
	extremity, each 15 minutes
	Subsequent prosthetic management and training of upper
	and lower extremities and trunk, each 15 minutes
	Subsequent prosthetic management and training of upper
	extremities and trunk, each 15 minutes
	Subsequent prosthetic management and training of upper
	extremities, each 15 minutes
	Subsequent prosthetic management and training of upper
	extremity and trunk, each 15 minutes
	Subsequent prosthetic management and training of upper
	extremity, each 15 minutes
	Subsequent prosthetic management of lower extremities
	and trunk, each 15 minutes
	Subsequent prosthetic management of lower extremity
	and trunk, each 15 minutes
	Subsequent prosthetic management of lower extremity,
	each 15 minutes
	Subsequent prosthetic management of upper and lower
L	

extremities and trunk, each 15 minutes
Subsequent prosthetic management of upper extremities
and trunk, each 15 minutes
Subsequent prosthetic management of upper extremities,
each 15 minutes
Subsequent prosthetic management of upper extremity
and trunk, each 15 minutes
Subsequent prosthetic management of upper extremity,
each 15 minutes
Subsequent prosthetic training of lower extremity, each 15
minutes
Subsequent prosthetic training of upper and lower
extremities and trunk, each 15 minutes
Subsequent prosthetic training of upper extremities and
trunk, each 15 minutes
Subsequent prosthetic training of upper extremities, each
15 minutes
Subsequent prosthetic training of upper extremity and
trunk, each 15 minutes
Subsequent prosthetic training of upper extremity, each 15
minutes
Subsequent orthotic management and training of lower
extremities, each 15 minutes
Subsequent orthotic management of lower extremities,
each 15 minutes
Subsequent orthotic training of lower extremities and trunk,
each 15 minutes
Subsequent orthotic training of lower extremities, each 15
Subsequent orthotic training of lower extremity and trunk,
each 15 minutes
Subsequent prosthetic management and training of lower
extremities, each 15 minutes
Subsequent prosthetic management of lower extremities,
each 15 minutes
Subsequent prosthetic training of lower extremities and
trunk, each 15 minutes
Subsequent prosthetic training of lower extremities, each 15

	minutes Subsequent prosthetic training of lower extremity and trunk, each 15 minutes
97799	Unlisted physical medicine/rehabilitation service or procedure
420	Physical Therapy
421	Physical Therapy: Visit Charge
422	Physical Therapy: Hourly Charge
423	Physical Therapy: Group Rate
424	Physical Therapy: Evaluation/Re-evaluation
429	Physical Therapy: Other Physical Therapy
97163	Evaluation of physical therapy, typically 45 minutes
97161	Evaluation of physical therapy, typically 20 minutes
97162	Evaluation of physical therapy, typically 30 minutes
97168	Re-evaluation of occupational therapy established plan of care, typically 30 minutes
97165	Evaluation of occupational therapy, typically 30 minutes
97166	Evaluation of occupational therapy, typically 45 minutes
97167	Evaluation of occupational therapy established plan of care, typically 60 minutes
G0151	Hhcp-serv of pt,ea 15 min

\*Default codes for suggested services

## Service: Home Health Care

#### <u>General Guidelines</u>

- Units, Frequency, & Duration: None.
- Criteria for Subsequent Requests: None.
- **Recommended Clinical Approach:** May be recommended for postoperative care if outpatient treatment is not indicated.
- **Exclusions:** None.

#### **Medical Necessity Criteria**

Indications

- → Home health care may be appropriate if ALL of the following are TRUE:
  - The patient lives with those that are unable to care for the patient postoperatively.
  - The patient underwent surgery.

Non-Indications

None.

Site of Service Criteria

Home

HCPCS Code	Code Description/Definition
99509	Home visit for assistance with activities of daily living and personal care
99600	Unlisted home visit procedure; Unlisted home visit service
99334	Level 1 rest home visit for evaluation and management of established patient with minor and/or self-limited problem, including problem-focused interval history and physical examination, and straightforward medical decision-making, typical time with patient, family, and/or caregiver 15 minutes
G0129	Partial hosp prog service
G0283	Elec stim other than wound

## Service: Inpatient Rehabilitation

#### **General Guidelines**

- Units, Frequency, & Duration: Postoperative rehabilitation is recommended to begin as soon as possible for all patients. No guidelines are available for rehabilitation duration, timing, or frequency.
- Criteria for Subsequent Requests: None.
- **Recommended Clinical Approach:** There are no firmly established criteria for discharge appropriateness. Discharge depends upon medical stability, pain control, home situation, and if PT/OT goals were met. Some patients may require non-home discharge after surgery depending upon their age, comorbidities, and functional needs. Rehabilitation guidelines are not firmly established; there is no data available on outcomes. Post-acute care may be warranted. Postoperative rehabilitation programs may include cognitive behavioral therapy.
- Exclusions: None.

#### **Medical Necessity Criteria**

#### Indications

- → Inpatient rehabilitation is considered appropriate if ALL of the following is TRUE:
  - ANY of the following are **TRUE**:
    - Neurologic deficit occurs postoperatively.
    - Postoperative complications.
    - Multiple medical comorbidities.
    - The patient requires maximum assistance for mobility.
    - The patient is a potentially unsafe discharge to home.
  - The patient underwent knee arthroplasty or osteotomy.

**Non-Indications** 

None.

<u>Site of Service Criteria</u>

Inpatient

HCPCS Code	Code Description/Definition
97799	Physical medicine service

## Service: Skilled Nursing Facility

**General Guidelines** 

- Units, Frequency, & Duration: None.
- Criteria for Subsequent Requests: None.
- **Recommended Clinical Approach:** May be indicated for postoperative care in cases where the surgery occurred at an inpatient hospital, and outpatient physical therapy or home health care are not indicated.
- Exclusions: None.

#### Medical Necessity Criteria

Indications

- → Skilled nursing facilities are considered appropriate if ALL of the following is TRUE:
  - **ANY** of the following are **TRUE**:
    - Neurologic deficit occurs postoperatively.
    - Postoperative complications.
    - Multiple medical comorbidities.
    - The patient requires maximum assistance for mobility.
    - The patient does not have others to take care of them at home.
  - The patient underwent surgery.

**Non-Indications** 

None.

<u>Site of Service Criteria</u> Skilled nursing facility (SNF)

HCPCS Code	Code Description/Definition
99304	Level 1 initial nursing facility care for evaluation and management of patient with problem of low severity, including comprehensive history and physical examination, and medical decision-making of low complexity, typical time 25 minutes; Level 1 initial nursing facility care for evaluation and management of patient with problem of low severity, including detailed history

	and physical examination, and straightforward medical decision-making, typical time 25 minutes
99305	Level 2 initial nursing facility care for evaluation and management of patient with problem of moderate severity, including comprehensive history and physical examination, and medical decision-making of moderate complexity, typical time 35 minutes
99306	Level 3 initial nursing facility care for evaluation and management of patient with problem of high severity, including comprehensive history and physical examination, and medical decision-making of high complexitym typical time 45 minutes
99307	Level I subsequent nursing facility care for evaluation and management of patient, including problem-focused interval history and physical examination, and straightforward medical decision-making, typical time 10 minutes; Level I subsequent nursing facility care for evaluation and management of patient, including problem-focused interval history and physical examination, typical time 10 minutes; Level I subsequent nursing facility care for evaluation and management of patient, including problem-focused interval history and straightforward medical decision-making, typical time 10 minutes; Level I subsequent nursing facility care for evaluation and management of patient, including problem-focused physical examination and straightforward medical decision-making, typical time 10 minutes; Level I subsequent nursing facility care for evaluation and management of patient, including problem-focused physical examination and straightforward medical decision-making, typical time 10 minutes
99308	Level 2 subsequent nursing facility care for evaluation and management of patient, including expanded problem-focused interval history and medical decision-making of low complexity, typical time 15 minutes; Level 2 subsequent nursing facility care for evaluation and management of patient, including expanded problem-focused interval history and physical examination, and medical decision-making of low complexity, typical time 15 minutes; Level 2 subsequent nursing facility care for evaluation and management of patient, including expanded problem-focused interval history and physical examination, typical time 15 minutes; Level 2 subsequent nursing facility care for evaluation and

	management of patient, including expanded problem-focused physical examination and medical decision-making of low complexity, typical time 15 minutes
99309	Level 3 subsequent nursing facility care for evaluation and management of patient, including detailed interval history and medical decision-making of moderate complexity, typical time 25 minutes; Level 3 subsequent nursing facility care for evaluation and management of patient, including detailed interval history and physical examination, and medical decision-making of moderate complexity. typical time 25 minutes; Level 3 subsequent nursing facility care for evaluation and management of patient, including detailed interval history and physical examination, typical time 25 minutes; Level 3 subsequent nursing facility care for evaluation and management of patient, including detailed physical examination and medical decision-making of moderate complexity, typical time 25 minutes
99310	Level 4 subsequent nursing facility care for evaluation and management of patient, including comprehensive interval history and medical decision-making of high complexity, typical time 35 minutes; Level 4 subsequent nursing facility care for evaluation and management of patient, including comprehensive interval history and physical examination, and medical decision-making of high complexity, typical time 35 minutes; Level 4 subsequent nursing facility care for evaluation and management of patient, including comprehensive interval history and physical examination, typical time 35 minutes; Level 4 subsequent nursing facility care for evaluation and management of patient, including comprehensive physical examination and medical decision-making of high complexity, typical time 35 minutes
99315	Nursing facility discharge day management, 30 minutes or less
99316	Nursing facility day management, more than 30 minutes
G0128	Corf skilled nursing service

# References

- 1. Kreiner DS, Shaffer WO, Baisden JL, et al. An evidence-based clinical guideline for the diagnosis and treatment of degenerative lumbar spinal stenosis (update). *Spine J*. 2013;13(7):734-743.
- Costandi S, Chopko B, Mekhail M, Dews T, Mekhail N. Lumbar Spinal Stenosis: Therapeutic Options Review. *Pain Practice*. 2014;15(1):68-81. doi:10.1111/papr.12188
- Lumbar Spinal Stenosis Ortholnfo AAOS. Orthoinfo.aaos.org. https://orthoinfo.aaos.org/en/diseases--conditions/lumbar-spinal-ste nosis/. Published 2013. Accessed May 18, 2020.
- 4. Willhuber G, Piuzzi N. Straight Leg Raise Test. Ncbi.nlm.nih.gov. https://www.ncbi.nlm.nih.gov/books/NBK539717/. Published 2020. Accessed April 21, 2020.
- 5. Panjabi MM, White AA 3rd. Basic biomechanics of the spine. Neurosurgery. 1980;7(1):76-93. doi:10.1227/00006123-198007000-00014
- 6. American College of Radiology. ACR Appropriateness Criteria Low Back Pain. ACR.org. Revised 2021.
- 7. American College of Radiology. ACR-SPR PRACTICE PARAMETER FOR IMAGING PREGNANT OR POTENTIALLY PREGNANT ADOLESCENTS AND WOMEN WITH IONIZING RADIATION. ACR.org. Revised 2018 (Resolution 39).
- 8. ACR Committee on Drugs and Contrast Media. ACR Manual on Contrast Media. ACR.org. 2022.
- 9. Lee JH, Moon J, Lee SH. Comparison of effectiveness according to different approaches of epidural steroid injection in lumbosacral herniated disk and spinal stenosis. *J Back Musculoskelet Rehabil.* 2009;22(2):83-89.
- Ackerman WE III, Ahmad M. The efficacy of lumbar epidural steroid injections in patients with lumbar disc herniations. *Anesth Analg.* 2007;104(5):1217-22.
- 11. Arden NK, Price C, Reading I, et al. A multicentre randomized controlled trial of epidural corticosteroid injections for sciatica: the WEST study. *Rheumatology (Oxford).* 2005;44(11):1399–1406.
- 12. Briggs VG, Li W, Kaplan MS, Eskander MS, Franklin PD. Injection treatment and back pain associated with degenerative lumbar spinal stenosis in older adults. *Pain Physician.* 2010;13(6):E347-55.
- 13. Buttermann GR. The effect of spinal steroid injections for degenerative disc disease. *Spine J.* 2004;4(5):495-505.
- 14. Candido KD, Raghavendra MS, Chinthagada M, Badiee S, Trepashko DW. A prospective evaluation of iodinated contrast flow patterns with fluoroscopically guided lumbar epidural steroid injections: the lateral parasagittal interlaminar epidural approach versus the transforaminal epidural approach. *Anesth Analg.* 2008;106(2):638-44.

- 15. Furman MB, Kothari G, Parikh T, Anderson JG, Khawaja A. Efficacy of fluoroscopically guided, contrast-enhanced lumbosacral interlaminar epidural steroid injections: a pilot study. *Pain Med.* 2010;11(9):1328-34.
- Kim D, Brown J. Efficacy and safety of lumbar epidural dexamethasone versus methylprednisolone in the treatment of lumbar radiculopathy: a comparison of soluble versus particulate steroids. *Clin J Pain.* 2011;27(6):518-522.
- 17. Manchikanti L, Cash KA, McManus CD, Pampati V, Benyamin RM. Fluoroscopic lumbar interlaminar epidural injections in managing chronic lumbar axial or discogenic pain. *J Pain Res.* 2012;5:301-11.
- Manchikanti L, Cash KA, McManus CD, Pampati V, Benyamin RM. Preliminary results of a randomized, double-blind, controlled trial of fluoroscopic lumbar interlaminar epidural injections in managing chronic lumbar discogenic pain without disc herniation or radiculitis. *Pain Physician*. 2010;13(4):E279-92.
- 19. Manchikanti L, Cash KA, McManus CD, Pampati V, Fellows B. Fluoroscopic caudal epidural injections with or without steroids in managing pain of lumbar spinal stenosis: one year results of randomized, double-blind, active-controlled trial. *J Spinal Disord Tech.* 2012;25(4):226-34.
- 20. Manchikanti L, Pakanati RR, Pampati V. Comparison of three routes of epidural steroid injections in low back pain. *Pain Digest.* 1999;9:277-85.
- 21. Manchikanti L, Singh V, Cash KA, Pampati V, Datta S. Management of pain of post lumbar surgery syndrome: one-year results of a randomized, double-blind, active controlled trial of fluoroscopic caudal epidural injections. *Pain Physician.* 2010;13(6):509-21.
- 22. Park CH, Lee SH, Kim BI. Comparison of the effectiveness of lumbar transforaminal epidural injection with particulate and nonparticulate corticosteroids in lumbar radiating pain. *Pain Med.* 2010;11(11):1654–1658.
- 23. Rados I, Sakic K, Fingler M, Kapural L. Efficacy of interlaminar vs transforaminal epidural steroid injection for the treatment of chronic unilateral radicular pain: prospective, randomized study. *Pain Med.* 2011;12(9):1316-21.
- 24. Kreiner DS, Hwang SW, Easa JE, et al. An evidence-based clinical guideline for the diagnosis and treatment of lumbar disc herniation with radiculopathy. Spine J. 2014;14(1):180-191. doi:10.1016/j.spinee.2013.08.003
- 25.Onggo JR, Nambiar M, Maingard JT, et al. The use of minimally invasive interspinous process devices for the treatment of lumbar canal stenosis: a narrative literature review. J Spine Surg. 2021;7(3):394-412. doi:10.21037/jss-21-57
- 26.Madera M, Brady J, Deily S, et al. The role of physical therapy and rehabilitation after lumbar fusion surgery for degenerative disease: a systematic review. Journal of Neurosurgery: Spine SPI. 2017;26(6):694-704. doi:10.3171/2016.10.SPINE16627

# Clinical Guideline Revision History/Information

Original Date: September 1, 2020		
Review History		
April 21, 2021 (V.1 – V.5)	Approving Physician: Dr. Brian Covino	
November 3, 2021 (V.6)	<b>Reviewing Physician:</b> Dr. Vijay Yanamadala <b>Approving Physician:</b> Dr. Brian Covino	
December 29, 2022 (V.7)	<b>Reviewing Physician:</b> Dr. Vijay Yanamadala <b>Approving Physician:</b> Dr. Traci Granston	