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Subject: Cervical Spine Surgery

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

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| Position Statement | Billing/Coding | Reimbursement | Program Exceptions | Definitions | Related Guidelines |
| Other | References | Updates | | | |

DESCRIPTION:

Cervical spinal fusion (arthrodesis) is a surgical technique that involves fusing 2 or more vertebrae using local bone, autologous bone taken from the iliac crest, allogeneic donor bone, or bone graft substitutes. Spinal fusion can be performed as a single procedure or in conjunction with other spinal surgeries.

Cervical discectomy is a surgical procedure in which one or more intervertebral discs are removed. Extrusion of an intervertebral disc beyond the intervertebral space can compress the spinal nerves and result in pain, numbness, and weakness. Discectomy is intended to treat symptoms by relieving pressure on the affected posterior nerve roots. Discectomy can be performed with or without spinal fusion, but is most commonly performed with fusion.

Cervical laminectomy is a surgical procedure in which a portion of the vertebra (the lamina) is removed to decompress the spinal cord. Removal of the lamina creates greater space for the spinal cord and the nerve roots, thus relieving compression on these structures. Laminectomy can be performed with or without spinal fusion, especially when instability of the spine is present preoperatively, or if the procedure is sufficiently extensive to expect postoperative spinal instability. The extent of laminectomy varies, but most commonly extends two levels above and below the site of maximal cord compression.

Cervical disc arthroplasty involves the insertion of a prosthetic device into the cervical intervertebral space. It is performed as an alternative to anterior cervical discectomy and fusion for people with symptomatic cervical degenerative disc disease. Cervical discs with FDA approval include Prestige® ST , ProDisc-C® , Bryan® Cervical Disc, PCM [porous-coated motion] Cervical Disc®, SECURE®-C, Mobi-C®, Prestige LP™ , M6®-C, and Simplify® Cervical Artificial Disc.

Summary and Analysis of Evidence: Sattari et al (2022) conducted a meta-analysis comparing anterior cervical discectomy with fusion (ACDF) versus posterior decompression (laminectomy with fusion,

laminectomy without fusion, or laminoplasty) in patients with multilevel degenerative cervical myelopathy spanning at least 2 levels without ossification of the posterior longitudinal ligament. Reviewers included 19 studies, most of which were comparative, non-randomized studies. Results demonstrated that both surgical approaches achieved similar functional outcomes at the 1-year follow-up, as well as similar risk of complications and mortality. Kotter et al (2020) reported on clinical outcomes from the AO Spine study following laminectomy with fusion versus laminectomy alone. At 24 months after surgery, there were significant differences between surgical groups in favor of laminectomy with fusion based on the modified JOA scores and Nurick scores; perioperative complications were similar between surgical groups (approximately 23% in each group). An UpToDate review, "Treatment and prognosis of cervical radiculopathy" (Kothari et al, 2024) stated anterior cervical discectomy and fusion (ACDF) is the most commonly used decompressive procedure in the cervical spine. The advantages of ACDF are that it requires little manipulation of the spinal cord or cervical roots and allows for removal of both lateral and midline disc herniation and osteophytes. Disadvantages include a small perioperative risk of damage to the carotid artery, trachea, esophagus, or recurrent laryngeal nerve. There is also a risk of pseudoarthrosis and further degenerative changes of adjacent segments." The review further stated that posterior laminoforaminotomy (PLF) "may be used when a single lateral disc herniation is present. A PLF is frequently performed, although many variations have been described. Midline pathology is not easily accessible with PLF. As a result, this approach is not useful in patients with midline disc herniation or osteophytes. The main advantages of PLF are that it involves no alteration of the architecture of the cervical spine and no risk of damage to anterior neck structures. The main disadvantage is that there may be more postoperative pain with PLF than with ACDF, although this is controllable with medications." Regarding artificial cervical disc replacement, the review concluded "Artificial cervical disc replacement surgery or cervical disc arthroplasty (CDA) is a developing technique for the treatment of cervical radiculopathy that has been used in situations when an ACDF would otherwise be appropriate. Mounting evidence suggests that CDA is equal or superior to ACDF in terms of clinical outcomes. In a 2016 systematic review and meta-analysis of eight randomized controlled trials and over 2300 subjects comparing CDA with ACDF with at least four years of follow-up, pooled analysis found that CDA led to significantly higher rates of success on most clinical outcome measures (eg, overall success, neurologic success, improvement of disability scores) and lower rates of implant or surgically related serious adverse events, but follow-up review in 2018 reported that initial outcomes were similar, but CDA had lower rates of repeat surgeries."

POSITION STATEMENT:

Cervical Spinal Fusion (single level or multiple levels)

Cervical spinal fusion **meets the definition of medical necessity** for the following:

- Clinically significant deformity of the spine (eg, kyphosis; head drop syndrome), if any of the following are present:
 - Severe neck pain
 - Difficulty walking
 - Inability to perform ADLs
 - Deformity affects forward gaze, **OR**

- Cervical instability associated with skeletal dysplasia or connective tissue disorders (eg, rheumatoid arthritis, lupus, scleroderma, polymyositis, dermatomyositis), **OR**
- Cervical radiculopathy or myelopathy that included at least 1 of the following:
 - Difficulty with fine movements of the hand and upper extremity
 - Incoordination of the hand and upper extremity
 - Atrophy of the thenar and hypothenar eminence
 - Diffuse hyperreflexia and bilateral Babinski responses
 - Decreased sensation, vibratory sense, and proprioception at a level of C5 or below
 - Inability to perform tandem walk
 - Bowel and bladder incontinence, **AND**
- Pain that is unresponsive to at least 6 weeks of conservative nonsurgical therapy that included at least 2 of the following: activity modification, exercise, analgesics, or physical therapy, **AND**
- Failure of epidural steroid injections or facet joint injections (if appropriate and not contraindicated), **AND**
- Imaging studies demonstrate herniated nucleus pulposus or spondylosis at the level that corresponds with symptoms, **OR**
- Treatment of axial neck pain when the following are met:
 - Pain is nonradicular, **AND**
 - Imaging demonstrates disc pathology or spinal instability, **AND**
 - Spine pathology is limited to one or two levels , **AND**
 - Improvement in symptoms has failed or plateaued following at least 6 months of conservative nonsurgical therapy that included both of the following:
 - Physical therapy, **AND**
 - Prescription strength analgesics for several weeks at a dose sufficient to induce a therapeutic response (including anti-inflammatory medications with or without adjunctive medications such as nerve membrane stabilizers or muscle relaxants, unless contraindicated or not tolerated)

Cervical Discectomy (with or without fusion)

Cervical discectomy **meets the definition of medical necessity** for the treatment of cervical herniated disc when the following are present:

- Signs and symptoms of radiculopathy or myelopathy on history or physical exam, that included at least 1 of the following:
 - Pain in the neck, subscapular region, or shoulder, often radiating into the arms
 - Sensory deficits or loss of pain sensation
 - Loss of deep tendon reflexes corresponding to affected nerve root level

- Gait disturbance, usually characterized by a spastic, scissoring quality
- Weakness, numbness or paresthesias in the arms
- Weakness in the lower extremities (increased reflexes, increased tone, and present Babinski signs)
- Bladder dysfunction, urgency, frequency, and/or retention
- Lhermitte sign (an electric shock-like sensation in the neck, radiating down the spine or into the arms, produced by forward flexion of the neck), **AND**
- One of the following clinical presentations is present:
 - Rapidly progressing neurologic deficits, **OR**
 - Persistent debilitating neck, back, or arm pain [defined as daily pain with a visual analog scale score of 4 or higher, that affects ADLs], and that is refractory to at least 6 weeks of conservative nonsurgical therapy that included the following:
 - Use of prescription-strength analgesics for several weeks at a dose sufficient to induce a therapeutic response (analgesics should include anti-inflammatory medications with or without adjunctive medications, such as nerve membrane stabilizers or muscle relaxants, unless contraindicated or not tolerated, **AND**
 - Participation in at least 6 weeks of physical therapy (including active exercise) or documentation of why the candidate could not tolerate physical therapy, **AND**
 - Evaluation and appropriate management of associated cognitive, behavioral, or addiction issues, if any, **OR**
 - Symptoms of radiculopathy or myelopathy are refractory to at least 6 weeks of conservative nonsurgical therapy that included the following:
 - Use of prescription-strength analgesics for several weeks at a dose sufficient to induce a therapeutic response (analgesics should include anti-inflammatory medications with or without adjunctive medications, such as nerve membrane stabilizers or muscle relaxants, unless contraindicated or not tolerated, **AND**
 - Participation in at least 6 weeks of physical therapy (including active exercise) or documentation of why the candidate could not tolerate physical therapy, **AND**
 - Evaluation and appropriate management of associated cognitive, behavioral, or addiction issues, if any, **AND**
- Documentation of nerve root compression on imaging (magnetic resonance imaging or computed tomography with myelogram of the cervical spine within the past 6 months) at a level that corresponds with symptoms

Cervical Laminectomy (with or without fusion)

Cervical laminectomy **meets the definition of medical necessity** when the following are met:

- Spinal cord or nerve root compression due to 1 of the following conditions:
 - Spinal stenosis (with or without spondylolisthesis), **OR**
 - Ossification of the posterior longitudinal ligament or the yellow ligament, **OR**

- Hypertrophy of the ligamentum flavum, **AND**
- Symptoms of at least 1 of the following:
 - Neurologic deficits that are rapidly progressive, **OR**
 - Cervical myelopathy or cervical cord compression (with or without radiculopathy), that includes at least 1 of the following:
 - Difficulty with fine movements of the hand and upper extremity
 - Incoordination of the hand and upper extremity
 - Atrophy of the thenar and hypothenar eminence
 - Diffuse hyperreflexia and bilateral Babinski responses
 - Decreased sensation, vibratory sense, and proprioception at a level of C5 or below
 - Inability to perform tandem walk
 - Bowel or bladder incontinence, **OR**
 - Persistent debilitating pain [defined as daily pain with a visual analog scale score of 4 or higher, that affects ADLs], that is refractory to at least 6 weeks of conservative nonsurgical therapy that included the following:
 - Use of prescription strength analgesics for several weeks at a dose sufficient to induce a therapeutic response (including anti-inflammatory medications with or without adjunctive medications such as nerve membrane stabilizers or muscle relaxants, unless contraindicated or not tolerated), **AND**
 - Participation in at least 6 weeks of physical therapy (including active exercise) or documentation of why the candidate could not tolerate physical therapy, **AND**
 - Evaluation and appropriate management of associated cognitive, behavioral, or addiction issues, if any, **AND**
- Imaging studies with findings of spinal cord compression, nerve root compression, and/or myelographic changes, at a level corresponding to the signs and symptoms

Cervical Disc Arthroplasty

Cervical disc arthroplasty **meets the definition of medical necessity** when the following are met:

- The device is approved by the U.S. Food and Drug Administration (FDA), **AND**
- Candidate is skeletally mature, **AND**
- Candidate has intractable cervical radicular pain or myelopathy that included at least 1 of the following:
 - Difficulty with fine movements of the hand and upper extremity
 - Incoordination of the hand and upper extremity
 - Atrophy of the thenar and hypothenar eminence

- Diffuse hyperreflexia and bilateral Babinski responses
- Decreased sensation, vibratory sense, and proprioception at a level of C5 or below
- Inability to perform tandem walk
- Bowel or bladder incontinence, **AND**
- Has failed at least 6 weeks of conservative nonsurgical therapy under the direction of a physician that included:
 - An active pain management program or protocol, **AND**
 - Pharmacotherapy that addresses neuropathic pain and other pain sources, unless contraindicated or not tolerated, **AND**
 - Physical therapy, or documentation of inability to perform physical therapy, **OR**
- Degeneration is documented by magnetic resonance imaging, computed tomography, or myelography, **AND**
- Cervical degenerative disc disease is from C3 through C7, **AND**
- Candidate is free from contraindications to cervical disc arthroplasty:
 - Prior surgery at the treated level
 - Previous fusion at another cervical level
 - Translational instability
 - Anatomic deformity (eg, ankylosing spondylitis)
 - Rheumatoid arthritis or other autoimmune disease
 - Presence of facet arthritis
 - Active infection
 - Metabolic bone disease (eg, osteoporosis, osteopenia, osteomalacia)
 - Malignancy

Simultaneous cervical disc arthroplasty at a second contiguous level (performed in the same operative session) **meets the definition of medical necessity** when the above criteria are met for each disc level, and the device is FDA-approved for 2 levels (eg, Mobi-C[®], Prestige LP[™]).

Subsequent cervical disc arthroplasty at an adjacent level (performed at subsequent operative session) **meets the definition of medical necessity** when the following are met:

- Criteria for cervical disc arthroplasty above are met, **AND**
- The device is FDA-approved for 2 level (eg, Mobi-C[®], Prestige LP[™]), **AND**
- The planned subsequent procedure is at a different cervical level than the initial cervical artificial disc replacement, **AND**
- There is documentation in the medical record that the initial cervical artificial intervertebral disc implantation is fully healed

Cervical disc arthroplasty is considered **experimental or investigational** for all other indications, including the following:

- Disc implantation at more than 2 levels
- Combined use of an artificial cervical disc and fusion

BILLING/CODING INFORMATION:

CPT Coding

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| 0095T | Removal of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, cervical (List separately in addition to code for primary procedure) |
| 0098T | Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, cervical (List separately in addition to code for primary procedure) |
| 0375T | Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophyctomy for nerve root or spinal cord decompression and microdissection), cervical, three or more levels (investigational) |
| 22548 | Arthrodesis, anterior transoral or extraoral technique, clivus-C1-C2 (atlas-axis), with or without excision of odontoid process |
| 22551 | Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophyctomy and decompression of spinal cord and/or nerve roots; cervical below C2 |
| 22552 | Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophyctomy and decompression of spinal cord and/or nerve roots; cervical below C2, each additional interspace (List separately in addition to code for separate procedure) |
| 22554 | Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below C2 |
| 22585 | Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure) |
| 22590 | Arthrodesis, posterior technique, craniocervical (occiput-C2) |
| 22595 | Arthrodesis, posterior technique, atlas-axis (C1-C2) |
| 22600 | Arthrodesis, posterior or posterolateral technique, single interspace; cervical below C2 segment |
| 22614 | Arthrodesis, posterior or posterolateral technique, single interspace; each additional interspace (List separately in addition to code for primary procedure) |
| 22856 | Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophyctomy for nerve root or spinal cord decompression and microdissection); single interspace, cervical |
| 22858 | Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophyctomy for nerve root or spinal cord decompression and microdissection); second level, cervical (List separately in addition to code for primary procedure) |

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| 22861 | Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical |
| 22864 | Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical |
| 63001 | Laminectomy 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; cervical |
| 63015 | Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), more than 2 vertebral segments; cervical |
| 63020 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical |
| 63035 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; each additional interspace, cervical or lumbar (List separately in addition to code for primary procedure) |
| 63040 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; cervical |
| 63043 | Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; each additional cervical interspace (List separately in addition to code for primary procedure) |
| 63045 | Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; cervical |
| 63048 | Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; each additional vertebral segment, cervical, thoracic, or lumbar (List separately in addition to code for primary procedure) |
| 63050 | Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments; |
| 63051 | Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments; with reconstruction of the posterior bony elements (including the application of bridging bone graft and non-segmental fixation devices [eg, wire, suture, mini-plates], when performed) |
| 63075 | Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, single interspace |
| 63076 | Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, each additional interspace (List separately in addition to code for primary procedure) |

REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline review date.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

[02-20000-48, Lumbar Spine Surgery](#)

OTHER:

None applicable.

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 03/28/24.

GUIDELINE UPDATE INFORMATION:

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| 07/01/15 | New Medical Coverage Guideline. |
| 07/15/16 | Unscheduled review. Maintained Position Statement section. Revised Program Exceptions section. Updated references. |
| 12/15/16 | Revision: added coverage criteria for artificial cervical disc replacement at two levels. Updated references. |
| 04/15/17 | Revision: clarified requirements for conservative treatment; added “and/or clonus” at each reference to “positive Babinski sign” in the guideline; deleted smoking cessation requirement for cervical artificial disc replacement. Updated references. |
| 07/15/18 | Scheduled review. Separated ACDF single level and multiple level criteria; separated PCDF single level and multiple level criteria; deleted “kyphosis or at risk for development of postoperative kyphosis” as not medically necessary for PCDF; added “kyphosis or at risk for development of postoperative kyphosis” as not medically necessary for posterior cervical decompression; revised definition of conservative therapy; deleted contraindications to spine surgery. Updated references. |
| 07/15/19 | Scheduled review. Revised description. Added nicotine cessation criteria for fusion procedures. Revised PCDF criteria at a single level and multiple levels; artificial cervical disc replacement criteria; and home exercise program requirements. Updated references. |
| 07/15/20 | Scheduled review. Revised description and position statement. Updated references. |
| 05/15/21 | Scheduled review. Maintained position statement and updated references. |
| 01/01/22 | Annual CPT/HCPCS coding update. Revised descriptor 22600, 22614 and 63048. |
| 06/10/23 | Scheduled review. Revised description and position statement. Updated references. |
| 04/15/24 | Scheduled review. Revised description, maintained position statement and updated references. |