Cigna Medical Coverage Policies – Musculoskeletal Thoracic and Thoracolumbar Fusion (Arthrodesis)

Effective July 1, 2025

Instructions for use

The following coverage policy applies to health benefit plans administered by Cigna. Coverage policies are intended to provide guidance in interpreting certain standard Cigna benefit plans and are used by medical directors and other health care professionals in making medical necessity and other coverage determinations. Please note the terms of a customer's particular benefit plan document may differ significantly from the standard benefit plans upon which these coverage policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a coverage policy.

In the event of a conflict, a customer's benefit plan document always supersedes the information in the coverage policy. In the absence of federal or state coverage mandates, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of:

1. The terms of the applicable benefit plan document in effect on the date of service
2. Any applicable laws and regulations
3. Any relevant collateral source materials including coverage policies
4. The specific facts of the particular situation

Coverage policies relate exclusively to the administration of health benefit plans. Coverage policies are not recommendations for treatment and should never be used as treatment guidelines.

This evidence-based medical coverage policy has been developed by eviCore, Inc. Some information in this coverage policy may not apply to all benefit plans administered by Cigna.

CMM-614: Thoracic / Thoracolumbar Fusion (Arthrodesis)

400 Buckwalter Place Boulevard, Bluffton, SC 29910 (800) 918-8924

CMM-614.1: General Guidelines

Application of Guideline

- The determination of medical necessity for the performance of thoracic or thoracolumbar fusion (with or without osteotomy) is always made on a case-by-case basis.
- For additional timing and documentation requirements, see **CMM-600.1: Prior Authorization Requirements**.

Urgent/Emergent Indications/Conditions

- The presence of urgent/emergent indications/conditions warrants definitive surgical treatment. **Imaging findings noted in the applicable procedure section(s) are required.**
  - The following criteria are **NOT** required for confirmed urgent/emergent conditions:
    - Provider-directed non-surgical management
    - Proof of smoking cessation
    - Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
    - Timeframe for repeat procedure
- Urgent/emergent conditions for thoracic/thoracolumbar fusion and/or osteotomy include **ANY** of the following:
  - Traumatic spinal fractures or dislocations (with or without neural compression) when instability is present or decompression of the spinal canal is anticipated to result in iatrogenic instability
  - Infection (e.g., discitis, epidural abscess, osteomyelitis) when instability is present or debridement and/or decompression is anticipated to result in iatrogenic instability
  - Primary or metastatic neoplastic disease causing pathologic fracture, cord compression, when instability is present, or resection and/or decompression is anticipated to result in iatrogenic instability
  - A condition otherwise meeting criteria listed in the applicable procedure section(s) with documentation of severe debilitating pain and/or dysfunction to the point of being incapacitated

CMM-614.2: Osteotomy

Posterior Column Osteotomy (PCO)

Thoracic or thoracolumbar posterior column osteotomy (PCO) (i.e., Smith-Peterson osteotomy [SPO] or Ponte osteotomy) is considered **medically necessary** (in addition to fusion) when **ALL** of the following criteria have been met:

- Correction of non-fixed deformity requiring 5° to 10° of correction (SPO) per spinal segment for **EITHER** of the following:
  - Thoracic or thoracolumbar **sagittal** plane deformities (i.e., <10° or >40°) when the deformity is non-fixed
  - Larger **coronal** deformities where there is limited flexibility (i.e., >40° on dynamic imaging)
- Posterior column osteotomy is limited to a maximum of four (4) posterior column osteotomies performed in the apex of the deformity per correction surgery.
  - **Criteria exception:** There is no limit to posterior column osteotomies for **correction of Scheuermann's Kyphosis** as this deformity is long, gradual, rounded, and is amenable to more than four (4) posterior column osteotomies.
- **ALL** of the criteria for thoracic or thoracolumbar fusion have been met per the applicable procedure-specific section :
  - **CMM-614.3: Pediatric Spinal Deformity**
  - **CMM-614.4: Initial Thoracic or Thoracolumbar Fusion (Arthrodesis) with Decompression**
  - **CMM-614.5: Thoracic or Thoracolumbar Fusion (Arthrodesis) without Decompression**
  - **CMM-614.6: Adjacent Segment Disease/Proximal Junctional Failure**
  - **CMM-614.7: Repeat Thoracic or Thoracolumbar Fusion (Arthrodesis) at the Same Level**

Three-Column Osteotomy

Thoracic or thoracolumbar three-column osteotomy (i.e., pedicle subtraction osteotomy [PSO] or vertebral column resection [VCR]) is considered **medically necessary** (in addition to fusion) when **ALL** of the following criteria have been met:

- Performed for **EITHER** of the following:
  - Correction of fixed sagittal plane deformity requiring more than 30° of correction (PSO)
  - Large fixed coronal deformities greater than 60° that are amenable to asymmetric osteotomy
- **ALL** of the criteria for thoracic or thoracolumbar fusion have been met per the applicable procedure-specific section :
  - **CMM-614.3: Pediatric Spinal Deformity**
  - **CMM-614.4 Initial :Thoracic or Thoracolumbar Fusion (Arthrodesis) with Decompression**

- **CMM-614.5: Thoracic or Thoracolumbar Fusion (Arthrodesis) without Decompression**
- **CMM-614.6: Adjacent Segment Disease/Proximal Junctional Failure**
- **CMM-614.7: Repeat Thoracic or Thoracolumbar Fusion (Arthrodesis) at the Same Level**

CMM-614.3: Pediatric Spinal Deformity

Pediatric Thoracic or Thoracolumbar Fusion

Thoracic or thoracolumbar fusion (arthrodesis) is considered **medically necessary** when performed for **ANY** of the following conditions when **BOTH** of the following criteria have been met:

- Imaging studies (advanced or plain X-rays) show the presence of **ANY** of the following pediatric spinal deformities warrants definitive surgical treatment:
  - Adolescent idiopathic scoliosis with Cobb angle over 50°
  - Congenital scoliosis
  - Neuromuscular scoliosis
  - Infantile/juvenile scoliosis

Pediatric Osteotomy

Thoracic or thoracolumbar osteotomy is considered **medically necessary** (in addition to a fusion) when **ALL** of the criteria have been met per **CMM-614.2: Osteotomy**.

CMM-614.4: Initial Thoracic or Thoracolumbar Fusion (Arthrodesis) with Decompression

Thoracic or thoracolumbar fusion (arthrodesis) with decompression is considered **medically necessary** when performed for **ANY** of the following conditions when **ALL** of the associated criteria have been met:

Actual Instability

- The individual is a candidate for thoracic decompression per **CMM-613: Thoracic Decompression-Discectomy**.
- Imaging shows **ANY** of the following:
  - Degenerative spondylolisthesis with **EITHER** of the following:
    - Dynamic segmental instability on flexion-extension plain X-rays **OR** comparison of a supine and upright image, with a difference in translational alignment between vertebrae greater than 3 mm between views
    - Meyerding Grade II or higher spondylolisthesis
  - Post-operative instability created by the disruption of the posterior elements due to facet joint excision that exceeds 50% bilaterally or 75% or more of a single facet
  - Pars fracture
  - Previous thoracic or thoracolumbar spinal decompression that resulted in iatrogenic spondylolisthesis
  - **Criteria exception**: When instability is created and/or identified intra-operatively, the above imaging criteria are **NOT** required.
    - See **Anticipated Iatrogenic Instability**

- Documentation of nicotine-free status with **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤10 ng/mL

Anticipated Iatrogenic Instability

- The individual is a candidate for thoracic decompression or corpectomy per **CMM-613: Thoracic Decompression-Discectomy**.
- Anticipated iatrogenic instability with **ANY** of the following:
  - Created by disruption of the posterior elements due to facet joint excision that exceeds 50% bilaterally or 75% or more of a single facet during spinal decompression
  - Created by excessive disc removal that could result in anterior instability
  - Created by removal of the pars interarticularis that requires fusion to stabilize
  - Created by decompression for Meyerding Grade I or higher spondylolisthesis with foraminal stenosis
  - Created by complete or partial corpectomy (i.e., **removal of at least one-third of the vertebral body** [not for resection of osteophytes alone])
    - For thoracic or thoracolumbar corpectomy, see **CMM-613.3: Thoracic Corpectomy**
- Documentation of nicotine-free status with **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤10 ng/mL

Adult Symptomatic Degenerative Spinal Deformity

- The individual is a candidate for thoracic decompression per **CMM-613: Thoracic Decompression-Discectomy**.
- Imaging findings include **EITHER** of the following:
  - Coronal plane deformity which includes **ANY** of the following:
    - Cobb angle greater than 30°
    - Asymmetric disk collapse causing foraminal narrowing
    - Global coronal imbalance causing head and trunk shift off the midline
  - Sagittal imbalance which includes **ANY** of the following:
    - Sagittal vertebral axis measurement greater than 8 cm
    - Pelvic incidence-lumbar lordosis greater than 15°
- Documentation of nicotine-free status with **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤10 ng/mL

Adult Residual Idiopathic Scoliotic Deformity

- The individual is a candidate for thoracic decompression or corpectomy per **CMM-613: Thoracic Decompression-Discectomy**.
- Imaging findings include **ANY** of the following:
  - Cobb angle of greater than 50°
  - Asymmetric disk collapse causing foraminal narrowing
  - Global coronal imbalance causing head and trunk shift off the midline
- Documentation of nicotine-free status with **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤10 ng/mL

Adult Symptomatic Residual Scheuermann's Kyphosis

- The individual is a candidate for thoracic decompression or corpectomy per **CMM-613: Thoracic Decompression-Discectomy**.
- Imaging findings include **ANY** of the following:
  - Sagittal vertebral axis measurement greater than 8 cm
  - Pelvic incidence-lumbar lordosis greater than 15°
  - Sagittal Cobb angle greater than 75°
- Documentation of nicotine-free status with **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤10 ng/mL

CMM-614.5: Initial Thoracic or Thoracolumbar Fusion (Arthrodesis) without Decompression

Thoracic or thoracolumbar fusion without decompression is considered **medically necessary** when performed for **ANY** of the following conditions when **ALL** of the associated criteria have been met:

Adult Symptomatic Degenerative Spinal Deformity

- Imaging shows **EITHER** of the following:
  - Coronal plane deformity which includes **ANY** of the following:
    - Cobb angle of greater than 30°
    - Asymmetric disk collapse causing foraminal narrowing
    - Global coronal imbalance causing head and trunk shift off the midline
  - Sagittal imbalance which includes **ANY** of the following:
    - Sagittal vertebral axis measurement greater than 8 cm
    - Pelvic incidence-lumbar lordosis greater than 15°
- Less than clinically meaningful improvement with **EITHER** of the following **for at least 3 consecutive months** (unless contraindicated):
  - Prescription strength analgesics, steroids, gabapentinoids, and/or NSAIDs
  - Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
- Documentation of nicotine-free status with **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤10 ng/mL

Adult Residual Idiopathic Scoliotic Deformity

- Imaging shows **ANY** of the following:
  - Cobb angle greater than 50°
  - Asymmetric disk collapse causing foraminal narrowing
  - Global coronal imbalance causing head and trunk shift off the midline
- For those cases with a Cobb angle of less than 50° or with a global coronal imbalance, less than clinically meaningful improvement with **EITHER** of the following for **at least 3 consecutive months** (unless contraindicated):
  - Prescription strength analgesics, steroids, gabapentinoids, and/or NSAIDs
  - Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)

- Documentation of nicotine-free status with **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤10 ng/mL

Adult Symptomatic Residual Scheuermann's Kyphosis

- Imaging shows **ANY** of the following:
  - Sagittal vertebral axis measurement greater than 8 cm
  - Pelvic incidence-lumbar lordosis greater than 15°
  - Sagittal Cobb angle greater than 75°
- Less than clinically meaningful improvement with **EITHER** of the following for **at least 3 consecutive months** (unless contraindicated):
  - Prescription strength analgesics, steroids, gabapentinoids, and/or NSAIDs
  - Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
- Documentation of nicotine-free status with **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤10 ng/mL

CMM-614.6: Adjacent Segment Disease/Proximal Junctional Failure

Thoracic or thoracolumbar fusion for adjacent segment disease is considered **medically necessary** when **ALL** of the following criteria have been met:

- The individual meets criteria for thoracic or thoracolumbar fusion per the applicable procedure-specific section below:
  - **CMM-614.4: Initial Thoracic or Thoracolumbar Fusion (Arthrodesis) with Decompression**
  - **CMM-614.5: Initial Thoracic or Thoracolumbar Fusion (Arthrodesis) without Decompression**
- Greater than six (6) months since the prior thoracic or thoracolumbar fusion at an adjacent level
- Plain X-rays show **EITHER** of the following:
  - Evidence of anterolisthesis on plain X-rays resulting in **ANY** of the following:
    - Dynamic segmental instability on flexion-extension plain X-rays **OR** comparison of a supine and upright image, with a difference in translational alignment between vertebra greater than 3 mm between views
    - Meyerding Grade II or higher spondylolisthesis
  - Evidence of kyphosis on plain X-rays

- Any spinal level showing 15° change of the sagittal Cobb angle (proximal junctional angle) with progressive pain or neurologic symptoms caused by either bony or posterior ligamentous complex failure

CMM-614.7: Repeat Thoracic or Thoracolumbar Fusion (Arthrodesis) at the Same Level

Repeat thoracic or thoracolumbar fusion (with or without thoracic or thoracolumbar decompression) at the same level is considered **medically necessary** for **EITHER** of the following conditions when **ALL** of the associated criteria have been met:

Malposition or Failure of Implant/Instrumentation or Structural Bone Graft

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

Symptomatic Pseudoarthrosis

- Greater than six (6) months since the prior thoracic or thoracolumbar fusion surgery
- Subjective symptoms include significant level of pain on a daily basis defined as clinically significant functional impairment (e.g., inability to perform household chores, prolonged standing, etc.)
- Post-operative physical exam findings are concordant with the individual's symptoms
- Less than clinically meaningful improvement with six (6) weeks of non-surgical treatment with **BOTH** of the following (unless contraindicated):
  - Prescription strength analgesics, steroids, gabapentinoids, and/or NSAIDs
  - Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician
- Post-operative imaging (performed at no less than six (6) months after the prior thoracic or thoracolumbar fusion) shows pseudoarthrosis at the requested level(s)
- Post-operative MRI/CT findings are concordant with the individual's symptoms
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
- Documentation of nicotine-free status including **EITHER** of the following:
  - Individual is a never-smoker
  - Individual has refrained from smoking, use of smokeless tobacco products, and/or nicotine replacement therapy for at least six (6) weeks prior to planned surgery as evidenced by blood cotinine lab results of ≤ 10 ng/mL

CMM-614.8: Non-Indications

Not Medically Necessary

- **Thoracic or thoracolumbar fusion** performed without meeting the criteria in the **General Guidelines** (when applicable for urgent/emergent conditions) **and** the criteria in the applicable procedure-specific section(s) (pediatric spinal deformity; fusion with decompression; fusion without decompression; adjacent segment disease; or, repeat fusion) is considered **not medically necessary**.
- **Thoracic or thoracolumbar osteotomy** performed without meeting the criteria in the **General Guidelines** (when applicable for urgent/emergent conditions) **and** the criteria in the applicable procedure-specific section (osteotomy; pediatric spinal deformity; fusion with decompression; fusion without decompression; adjacent segment disease; or, repeat fusion) is considered **not medically necessary**.
- **Thoracic or thoracolumbar fusion** and/or **osteotomy** performed for **ANY** of the following sole indications is considered **not medically necessary**:
  - Multi-level degenerative disc disease without instability or significant adult deformity
  - Facet joint disorders without instability
  - Initial discectomy/laminectomy without instability
  - An adjunct to primary decompression of central and/or lateral recess stenosis in the absence of instability, spondylolisthesis, adult deformity, or an actual or anticipated bony resection that will result in iatrogenic instability

Experimental, Investigational, or Unproven (EIU)

- Thoracic or thoracolumbar fusion is considered **experimental, investigational, or unproven (EIU)** for **ALL** of the following devices/procedures (not an all-inclusive list):
  - Minimally invasive thoracic or thoracolumbar fusion using direct visualization via endoscopy (endoscopic fusion) or indirect visualization (e.g., percutaneous fusion)
  - Endoscopic thoracic decompression with interbody fusion
  - Isolated facet fusion, with or without instrumentation, including allograft bone graft substitutes used exclusively as stand-alone stabilization devices (e.g., TruFuse [any level], NuFix® [any level])
  - Total facet arthroplasty
  - Device/implant not FDA approved (in thoracic spine)

Codes (CMM-614)

The inclusion of any code in this table does not imply that the code is under management or requires prior authorization. Refer to the applicable health plan for management details. Prior authorization of a code listed in this table is not a guarantee of payment. The Certificate of Coverage or Evidence of Coverage policy outlines the terms and conditions of the member's health insurance policy.

Code	Code Description/Definition
22206	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (e.g., Pedicle/vertebral body subtraction); thoracic
+22208	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (e.g., Pedicle/vertebral body subtraction); each additional vertebral segment (List separately in addition to code for primary procedure)
22212	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; thoracic
+22216	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)
22222	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; thoracic
+22226	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment, each additional vertebral segment (List separately in addition to code for primary procedure)
22532	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
+22534	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic or lumbar, each additional vertebral segment (List separately in addition to code for primary procedure)
22556	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
+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)
22610	Arthrodesis, posterior or posterolateral technique, single level; thoracic (with lateral transverse technique, when performed)
+22614	Arthrodesis, posterior or posterolateral technique, single level; each additional vertebral segment (List separately in addition to code for primary procedure)

Code	Code Description/Definition
22800	Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments
22802	Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments
22804	Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments
22808	Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments
22810	Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebral segments
22812	Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebral segments
63003	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; thoracic
63016	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; thoracic
63046	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; thoracic
+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 segment, cervical, thoracic, or lumbar (List separately in addition to code for primary procedure)
63055	Transpedicular approach with decompression of spinal cord, equina and /or nerve root(s) (e.g., herniated intervertebral disc), single segment; thoracic
+ 63057	Transpedicular approach with decompression of spinal cord, equina and/or nerve(s) (e.g., herniated intervertebral disc), single segment; each additional segment, thoracic or lumbar (List separately in addition to code for primary procedure)
63077	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, single interspace
+63078	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, each additional interspace (List separately in addition to code for primary procedure)

Code	Code Description/Definition
63266	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; thoracic
0220T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; thoracic

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Evidence Discussion (CMM-614)

Thoracic/Thoracolumbar Fusion

Risks for thoracic fusion include, but are not limited to, the following: infection; neurovascular injury; persistent or incomplete relief of symptoms; possible need for more surgery; dural tear; pulmonary complications; neurologic injury; and, death. Complication rates range from 20-42% with variations depending upon the surgical approach. In addition, there are fusion related complications including pseudoarthrosis, junctional kyphosis, hardware failure and iatrogenic spinal deformity.

The indications for thoracic/thoracolumbar fusion include the following: degenerative spinal deformity; residual adult idiopathic scoliotic deformity/Scheuermann's deformity; and, instability or anticipated instability associated with decompression/discectomy surgery with neural compression and symptoms. It is also indicated for traumatic disorders, infection, and tumors.

In properly selected individuals, there are high success rates in thoracic fusions with rates as high as 98-100%. Fusion rates are impacted by age of patient and level of fusion. Several studies report thoracic disc herniations can be treated safely with posterior decompression and pedicle sparing fusion.

It has been shown in the literature that individuals with psychosocial disorders or with a smoking history undergoing fusion have poorer outcomes and higher complication rates. Proper identification and treatment of these conditions prior to surgery may significantly improve many outcome measures.

As risk for major complications exists for thoracic/thoracolumbar fusion surgery, it is critical to optimally ensure that individuals receive treatment that is appropriate, safe and effective.

References (CMM-614)

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