

Evidence Discussion (CMM-614: Thoracic/Thoracolumbar Fusion)

Risks for thoracic fusion include but are not limited to 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. [1, 2, 3]. In addition there are fusion related complications including psuedarthrosis, junctional kyphosis, hardware failure and iatrogenic spinal deformity. [4]

The indications for thoracic/thoracolumbar fusion include degenerative spinal deformity, residual adult idiopathic scoliotic deformity/Schuermann's deformity, instability or anticipated instability associated with decompression/discectomy surgery with neural compression and symptoms. It is also indicated for traumatic disorders, infection and tumors. [5]

In properly selected patients, there are high success rates in thoracic fusions with rates as high as 98-100%. [6] Fusion rates are impacted by age of patient and level of fusion. [7] Several studies report thoracic disc herniations can be treated safely with posterior decompression and pedicle sparing fusion. [8, 9]

It has been shown in the literature that patients with psychosocial disorders or with a smoking history undergoing fusion have poorer outcomes and higher complication rates. [10, 11]. 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 patients receive treatment that is appropriate, safe and effective. Although the use of any coverage criteria includes the possible risk of delayed care, the application of evidence based criteria best ensure patient safety and highly outweigh any clinical harms.

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