Description:
Percutaneous vertebroplasty is a therapeutic, interventional radiologic procedure performed under imaging guidance that consists of the injection of medical grade cement through a needle into a painful fractured cervical, thoracic or lumbar vertebral body to stabilize the fracture. Vertebroplasty is performed in an attempt to relieve pain and strengthen the spine.

Percutaneous kyphoplasty is similar to vertebroplasty in that stabilization of a collapsed vertebra is accomplished by the injection of bone cement. Under fluoroscopic guidance, an inflatable balloon is inserted to expand a collapsed vertebral body to its natural height prior to the injection of the cement. With kyphoplasty, some of the bony deformity and resulting kyphosis may be reduced which will often significantly improve a patient’s pain.

Criteria: CWQI HCS-0049 (This criteria is consistent with CMS Guidelines for Percutaneous Vertebral Augmentation)

I. Vertebroplasty or kyphoplasty will be covered to plan limitations when ALL of the following has been met:
   a. Patients with acute (< 4 months of symptoms) vertebral collapse and persistent, debilitating pain in the cervical, thoracic or lumbar bodies confirmed by plain film, CT or by MRI resulting from 1 or more of the following:
      1. Painful osteoporotic vertebral collapse/compression fractures
      2. Traumatic fracture
      3. Painful osteolytic vertebral compression fracture related to benign or malignant tumor, such as hemangioma, metastatic disease, myeloma, lymphoma and histiocytosis
      4. Steroid induced fractures

   b. Severe debilitating pain or loss of mobility that cannot be relieved by at least 6 weeks of optimal medical therapy, unless there is a traumatic fracture or acute vertebral collapse including 1 or more of the following:
      1. NSAIDS
      2. Narcotics
      3. Back bracing
      4. Physical Therapy
      5. Initial bed rest with progressive activity
c. Other causes of pain, such as herniated intervertebral disk, have been ruled out by CT or MRI

d. The affected vertebra has not been extensively destroyed and is at least one-third of its original height

e. Pain must be predominantly related to the demonstrated fracture(s), of moderate to severe intensity (e.g., pain level at least 6 on VAS 1-10), such that the patient cannot perform basic activities of daily living (ADLs), such as ambulation, sitting, bathing, transfers.

III. Contraindications:
1. Coagulation disorders
2. Underlying infection such as osteomyelitis of the affected vertebra
3. Neurological symptoms related to spinal compression
4. Lack of neurosurgical backup for emergency decompression in the event a neurological deficit develops during the injections of the cement
5. Absence of a confirmed acute or subacute fracture
6. Unstable fracture
7. Asymptomatic vertebral compression fracture
8. Burst fracture with retropulsed fragments
9. Known allergy to materials used in either procedure

IV. Information to be Submitted with Pre-Authorization Request:
1. Medical records from the treating physician documenting the spinal level involved, the severity of pain, previous treatments tried, and the patient’s neurologic condition
2. X-Ray, CT, or MRI report documenting vertebral collapse

Medicare Reference:
LCD: 34106 Percutaneous Vertebral Augmentation

Applicable CPT/HCPC Codes:
Note: list is not all inclusive

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22520</td>
<td>Percutaneous vertebroplasty, 1 vertebral body, unilateral or bilateral injection; thoracic</td>
</tr>
<tr>
<td>22521</td>
<td>Percutaneous vertebroplasty, 1 vertebral body, unilateral or bilateral injection; lumbar</td>
</tr>
<tr>
<td>22522</td>
<td>Percutaneous vertebroplasty, 1 vertebral body, unilateral or bilateral injection; each additional thoracic or lumbar vertebral body (List separately in addition to code for primary procedure)</td>
</tr>
</tbody>
</table>
Subject: Kyphoplasty and Vertebroplasty

## Moda Health Medical Necessity Criteria

### Developed By: Medical Criteria Committee

### Origination Date: 10/03

### Revision Date(s): 10/04, 10/05, 11/06, 11/07, 11/08, 7/10, 7/11, 6/12, 04/13, 04/14, 04/15, 12/15

### 22523

Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation (e.g., kyphoplasty); thoracic

### 22524

Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation (e.g., kyphoplasty); lumbar

### 22525

Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation (e.g., kyphoplasty); each additional thoracic or lumbar vertebral body (List separately in addition to code for primary procedure)

### 72291

Radiological supervision and interpretation, percutaneous vertebroplasty, vertebral augmentation, or sacral augmentation (sacroplasty), including cavity creation, per vertebral body or sacrum; under fluoroscopic guidance

### 72292

Radiological supervision and interpretation, percutaneous vertebroplasty, vertebral augmentation, or sacral augmentation (sacroplasty), including cavity creation, per vertebral body or sacrum; under CT guidance

### S2360

Percutaneous vertebroplasty, one vertebral body, unilateral or bilateral injection; cervical

### S2361

Each additional cervical vertebral body

### Applicable ICD-10 Codes:

<table>
<thead>
<tr>
<th>ICD_10 Codes</th>
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<tbody>
<tr>
<td>M48.50XA</td>
<td>Collapsed vertebra, not elsewhere classified, site unspecified, initial encounter for fracture</td>
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<tr>
<td>M80.08XA</td>
<td>Age-related osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture</td>
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<tr>
<td>M81.0</td>
<td>Age-related osteoporosis without current pathological fracture</td>
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<tr>
<td>M81.0</td>
<td>Age-related osteoporosis without current pathological fracture</td>
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<tr>
<td>M81.8</td>
<td>Other osteoporosis without current pathological fracture</td>
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<td>M84.48XA</td>
<td>Pathological fracture, other site, initial encounter for fracture</td>
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<tr>
<td>M84.68XA</td>
<td>Pathological fracture in other disease, other site, initial encounter for fracture</td>
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<td>M89.00</td>
<td>Algoneurodystrophy, unspecified site</td>
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</table>
Subject: Kyphoplasty and Vertebroplasty

<table>
<thead>
<tr>
<th>S12.200A</th>
<th>Unspecified displaced fracture of third cervical vertebra, initial encounter for closed fracture</th>
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<tbody>
<tr>
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<td>Unspecified nondisplaced fracture of third cervical vertebra, initial encounter for closed fracture</td>
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<td>Unspecified displaced fracture of fourth cervical vertebra, initial encounter for closed fracture</td>
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<td>Unspecified displaced fracture of fifth cervical vertebra, initial encounter for closed fracture</td>
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<td>S12.501A</td>
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<td>S12.9XXA</td>
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<td>S22.009A</td>
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<td>S32.009A</td>
<td>Unspecified fracture of unspecified lumbar vertebra, initial encounter for closed fracture</td>
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<tr>
<td>S32.10XA</td>
<td>Unspecified fracture of sacrum, initial encounter for closed fracture</td>
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<tr>
<td>SS32.2XXA</td>
<td>Fracture of coccyx, initial encounter for closed fracture</td>
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<th>Review Date</th>
<th>Revisions</th>
<th>Effective Date</th>
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<td>04/2013</td>
<td>Annual Review: Added table with review date, revisions, and effective date.</td>
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<td>04/30/2014</td>
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<td>04/25/2015</td>
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<td>07/2015</td>
<td>Added ICD-9 and ICD-10 Codes</td>
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<td>12/1/15</td>
<td>Edited with new LCD- Deleted ICD-9 codes</td>
<td>12/2/2015</td>
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## Kyphoplasty and Vertebroplasty

### References:

- Balloons for bones. Supplied by the office of Dr. Andrew J. Kokkino
Subject: Kyphoplasty and Vertebroplasty

Origination Date: 10/03
Revision Date(s): 10/04, 10/05, 11/06, 11/07, 11/08, 7/10, 7/11, 6/12, 04/13, 04/14, 04/15, 12/15

Developed By: Medical Criteria Committee

- Ledlie JT, Renfro, M. Balloon kyphoplasty: one-year outcomes in vertebral body height restoration,
- Vertebroplasty benefits selected patients. Hayes Alert; Feb. 2003; VI(2).

• Centers for Medicare & Medicaid Services; Local Coverage Determination (LCD): Percutaneous Vertebral Augmentation (L34106); Noridian Healthcare Solutions; Revision Date 10/1/2015; Effective date 10/01/2015

• Physician Advisors