

# Vertebral Augmentation Procedure (VAP)/ Percutaneous Vertebroplasty

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[↪ Terms and Conditions](#)

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<p>Related Medicare Advantage Policy Guideline</p> <ul style="list-style-type: none"> <li><a href="#">Category III CPT Codes</a></li> </ul>
<p>Related Medicare Advantage Reimbursement Policy</p> <ul style="list-style-type: none"> <li><a href="#">Spine Procedures</a></li> </ul>
<p>Related Medicare Advantage Reimbursement Policy</p> <ul style="list-style-type: none"> <li><a href="#">Multiple Procedure Payment Reduction (MPPR) for Medical and Surgical Services Policy, Professional</a></li> </ul>

## Policy Summary

[↪ See Purpose](#)

### Overview

#### *Percutaneous Vertebral Augmentation*

Percutaneous vertebral augmentation (PVA) is a minimally invasive procedure for the treatment of compression fractures of the vertebral body. The procedure includes a cavity creation which results in fracture reduction along with an attempt to restore vertebral body height and alignment. Using image guidance x-rays, incisions are made and a probe is placed into the vertebral space in the location of the fracture. The collapsed vertebral body is drilled and a device which displaces, removes or compacts the compressed area of the vertebrae is used to create a cavity prior to injection of bone filler (polymethylmethacrylate) (PMMA).

#### *Percutaneous Vertebroplasty*

Percutaneous vertebroplasty (PVP) is a therapeutic, interventional neurosurgical and radiological procedure that consists of the percutaneous injection of a biomaterial, methyl methacrylate, into a lesion of a thoracic or lumbar vertebral body. The procedure is utilized for pain relief and bone strengthening of weakened vertebral bodies.

The procedure is performed under fluoroscopic guidance, although some prefer the use of computed tomography (CT) with fluoroscopy for needle positioning and injection assessment. An intraosseous venogram is sometimes performed before cement injection to determine whether the needle is positioned within a direct venous anastomosis to the central or epidural veins, to minimize extravasation into venous structures. Conscious sedation with additional local anesthesia (1% lidocaine) is generally utilized; however, patients who experience difficulties with ventilation or are unable to tolerate prone position during the procedure may require general anesthesia or deep sedation with airway and ventilation support. The methyl methacrylate is injected into the vertebral body until resistance is met or until cement reaches the posterior wall.

### Guidelines

PVA (percutaneous vertebroplasty (PVP) or kyphoplasty (PKP)) is covered for Osteoporotic Vertebral Compression Fracture (VCF) in patients with both the following:

- Inclusion criteria (all are required):
  - Acute\* (< 6 weeks) osteoporotic VCF (T5 – L5) by recent (within 30 days) advanced imaging (bone marrow edema on MRI or bone-scan/SPECT/CT uptake)
  - Symptomatic (one):
    - Hospitalized with severe pain (Numeric Rating Scale (NRS) or Visual Analog Scale (VAS) pain score ≥ 8)
    - Non-hospitalized with moderate to severe pain (NRS or VAS ≥5) despite optimal non-surgical management (NSM) (10)\*\* (one):
      - Worsening pain
      - Stable to improved pain (but NRS or VAS still ≥5) (with ≥ 2 of the following):
        - Progression of vertebral body height loss
        - 25% vertebral body height reduction
        - Kyphotic deformity
        - Severe impact of VCF on daily functioning (Roland Morris Disability Questionnaire (RDQ) >17)
  - Multidisciplinary team consensus (2) (all are required)
    - Referring physician (e.g., rheumatologist, endocrinologist)
    - Treating physician (i.e., performing the PVA)
    - Radiologist
    - Neurologist
- Exclusion criteria (Can have none of the following):
  - Absolute contraindication
    - Current back pain is not primarily due to the identified acute VCF(s).
    - Osteomyelitis, discitis or active systemic infection
    - Pregnancy
    - Greater than three vertebral fractures
  - Relative contraindication
    - Allergy to bone cement or opacification agents
    - Coagulopathy
    - Spinal instability
    - Myelopathy from the fracture
    - Neurologic deficit
    - Neural impingement
    - Fracture retropulsion/canal compromise\*\*

\*At least an acute component (e.g., acute on chronic)

\*\*Consider including pedicle periosteal infiltration

Note: See Local Coverage Determination (LCD) [References](#) for coverage details. Coverage for Malignant Vertebral Fractures varies by LCD.

## Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this guideline does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CPT Code	Description
22510	Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; cervicothoracic
22511	Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; lumbosacral
22512	Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; each additional cervicothoracic or lumbosacral vertebral body (List separately in addition to code for primary procedure)

CPT Code	Description
22513	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; thoracic
22514	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; lumbar
22515	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; each additional thoracic or lumbar vertebral body (List separately in addition to code for primary procedure)
22899	Unlisted procedure, spine

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## References

### CMS Local Coverage Determinations (LCDs) and Articles

LCD	Article	Contractor	Medicare Part A	Medicare Part B
<a href="#">L33473 Vertebroplasty/Kyphoplasty</a>	<a href="#">A56819 Billing and Coding: Vertebroplasty/Kyphoplasty</a>	Palmetto	AL, GA, NC, SC, TN, VA, WV	AL, GA, NC, SC, TN, VA, WV
<a href="#">L33569 Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	<a href="#">A56178 Billing and Coding: Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	NGS	CT, IL, MA, ME, MN, NH, NY, RI, VT, WI	CT, IL, MA, ME, MN, NH, NY, RI, VT, WI
<a href="#">L38201 Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	<a href="#">A57282 Billing and Coding: Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	CGS	KY, OH	KY, OH
<a href="#">L34048 Vertebroplasty and Vertebral Augmentation- Percutaneous</a> Retired 11/17/2019 (See L38201)	<a href="#">A56801 Billing and Coding: Vertebroplasty and Vertebral Augmentation (Percutaneous)</a> Retired 11/17/2019 (See A57282)  <a href="#">A52416 Vertebroplasty and Vertebral Augmentation (Percutaneous) - Supplemental Instructions Article</a> Retired 08/14/2019 (See A56801)			
<a href="#">L34106 Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	<a href="#">A56573 Billing and Coding: Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	Noridian	AK, AZ, ID, MT, ND, OR, SD, UT, WA, WY	AK, AZ, ID, MT, ND, OR, SD, UT, WA, WY
<a href="#">L34228 Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	<a href="#">A56572 Billing and Coding: Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	Noridian	AS, CA, GU, HI, MP, NV	AS, CA, GU, HI, MP, NV

LCD	Article	Contractor	Medicare Part A	Medicare Part B
<a href="#">L38213 Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	<a href="#">A57630 Billing and Coding: Percutaneous Vertebral Augmentation (PVA) for Osteoporotic Vertebral Compression Fracture (VCF)</a>	WPS	AK, AL, AR, AZ, CA, CO, CT, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY	IA, IN, KS, MI, MO, NE
<a href="#">L34592 (Vertebroplasty (Percutaneous) and Vertebral Augmentation including cavity creation)</a> Retired 12/15/2019 (See L38213)	N/A			
<a href="#">L34976 Percutaneous Vertebral Augmentation (PVA) for Vertebral Compression Fracture (VCF)</a>	<a href="#">A57872 Billing and Coding: Percutaneous Vertebral Augmentation (PVA) for Vertebral Compression Fracture (VCF)</a>	First Coast	FL, PR, VI	FL, PR, VI
<a href="#">L35130 Percutaneous Vertebral Augmentation (PVA) for Vertebral Compression Fracture (VCF)</a>	<a href="#">A57752 Billing and Coding: Percutaneous Vertebral Augmentation (PVA) for Vertebral Compression Fracture (VCF)</a>	Novitas	AR, CO, DC, DE, LA, MD, MS, NJ, NM, OK, PA, TX	AR, CO, DC, DE, LA, MD, MS, NJ, NM, OK, PA, TX

## CMS Claims Processing Manual

[Chapter 14; § 20 List of Covered Ambulatory Surgical Center Procedures](#)

## UnitedHealthcare Commercial Policy

[Percutaneous Vertebroplasty and Kyphoplasty](#)

## Other(s)

[MLN Medicare Quarterly Provider Compliance Newsletter Guidance to Address Billing Errors, dated July, 2014](#)

## Guideline History/Revision Information

Revisions to this summary document do not in any way modify the requirement that services be provided and documented in accordance with the Medicare guidelines in effect on the date of service in question.

Date	Summary of Changes
04/01/2021	<b>Template Update</b> <ul style="list-style-type: none"> <li>Reformatted policy; transferred content to new template</li> </ul>
08/12/2020	<b>Policy Summary</b> <p><i>Overview</i></p> <ul style="list-style-type: none"> <li>Removed language indicating the percutaneous vertebroplasty (PVP) procedure usually lasts from 1 to 2 hours, unless cement is injected into two or more vertebral bodies</li> </ul> <p><i>Guidelines</i></p> <ul style="list-style-type: none"> <li>Revised language to indicate percutaneous vertebral augmentation (PVA) [percutaneous vertebroplasty (PVP) or kyphoplasty (PKP)] is covered for osteoporotic vertebral compression fracture (VCF) in patients with both the following: <ul style="list-style-type: none"> <li>Inclusion criteria (all are required):</li> </ul> </li> </ul>

Date	Summary of Changes
	<ul style="list-style-type: none"> <li>▪ Acute (at least an acute component [e.g., acute on chronic]) (&lt; 6 weeks) osteoporotic VCF (T5–L5) by recent (within 30 days) advanced imaging (bone marrow edema on MRI or bone-scan/SPECT/CT uptake)</li> <li>▪ Symptomatic (one of the following): <ul style="list-style-type: none"> <li>- Hospitalized with severe pain (Numeric Rating Scale [NRS] or Visual Analog Scale [VAS] pain score <math>\geq</math> 8) <ul style="list-style-type: none"> <li>• Non-hospitalized with moderate to severe pain (NRS or VAS <math>\geq</math> 5) despite optimal non-surgical management (NSM) (consider including pedicle periosteal infiltration) (one of the following):</li> <li>• Worsening pain</li> <li>• Stable to improved pain (but NRS or VAS still <math>\geq</math> 5) (with at least two of the following): <ul style="list-style-type: none"> <li>○ Progression of vertebral body height loss</li> <li>○ &gt; 25% vertebral body height reduction</li> <li>○ Kyphotic deformity</li> <li>○ Severe impact of VCF on daily functioning (Roland Morris Disability Questionnaire [RDQ] &gt; 17)</li> </ul> </li> </ul> </li> <li>▪ Multidisciplinary team consensus (all are required): <ul style="list-style-type: none"> <li>- Referring physician (e.g., rheumatologist, endocrinologist)</li> <li>- Treating physician (i.e., performing the PVA)</li> <li>- Radiologist</li> <li>- Neurologist</li> </ul> </li> </ul> </li> <li>○ Exclusion criteria (can have none of the following): <ul style="list-style-type: none"> <li>▪ Absolute contraindication <ul style="list-style-type: none"> <li>- Current back pain is not primarily due to the identified acute VCF(s).</li> <li>- Osteomyelitis, discitis or active systemic infection</li> <li>- Pregnancy</li> <li>- Greater than three vertebral fractures</li> </ul> </li> <li>▪ Relative contraindication <ul style="list-style-type: none"> <li>- Allergy to bone cement or opacification agents</li> <li>- Coagulopathy</li> <li>- Spinal instability</li> <li>- Myelopathy from the fracture</li> <li>- Neurologic deficit</li> <li>- Neural impingement</li> <li>- Fracture retropulsion/canal compromise</li> </ul> </li> </ul> </li> <li>• Updated notation to indicate coverage for <i>malignant vertebral fractures</i> varies by LCD</li> </ul> <p><b>Applicable Codes</b></p> <ul style="list-style-type: none"> <li>• Removed CPT codes 0200T and 0201T</li> </ul> <p><b>Supporting Information</b></p> <ul style="list-style-type: none"> <li>• Updated <i>References</i> section to reflect the most current information</li> <li>• Archived previous policy version MPG345.05</li> </ul>

## Purpose

The Medicare Advantage Policy Guideline documents are generally used to support UnitedHealthcare Medicare Advantage claims processing activities and facilitate providers' submission of accurate claims for the specified services. The document can be used as a guide to help determine applicable:

- Medicare coding or billing requirements, and/or
- Medical necessity coverage guidelines; including documentation requirements.

UnitedHealthcare follows Medicare guidelines such as NCDs, LCDs, LCAs, and other Medicare manuals for the purposes of determining coverage. It is expected providers retain or have access to appropriate documentation when requested to support

coverage. Please utilize the links in the [References](#) section below to view the Medicare source materials used to develop this resource document. This document is not a replacement for the Medicare source materials that outline Medicare coverage requirements. Where there is a conflict between this document and Medicare source materials, the Medicare source materials will apply.

## Terms and Conditions

The Medicare Advantage Policy Guidelines are applicable to UnitedHealthcare Medicare Advantage Plans offered by UnitedHealthcare and its affiliates.

These Policy Guidelines are provided for informational purposes, and do not constitute medical advice. Treating physicians and healthcare providers are solely responsible for determining what care to provide to their patients. Members should always consult their physician before making any decisions about medical care.

Benefit coverage for health services is determined by the member specific benefit plan document\* and applicable laws that may require coverage for a specific service. The member specific benefit plan document identifies which services are covered, which are excluded, and which are subject to limitations. In the event of a conflict, the member specific benefit plan document supersedes the Medicare Advantage Policy Guidelines.

Medicare Advantage Policy Guidelines are developed as needed, are regularly reviewed and updated, and are subject to change. They represent a portion of the resources used to support UnitedHealthcare coverage decision making. UnitedHealthcare may modify these Policy Guidelines at any time by publishing a new version of the policy on this website. Medicare source materials used to develop these guidelines include, but are not limited to, CMS National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Medicare Benefit Policy Manual, Medicare Claims Processing Manual, Medicare Program Integrity Manual, Medicare Managed Care Manual, etc. The information presented in the Medicare Advantage Policy Guidelines is believed to be accurate and current as of the date of publication and is provided on an "AS IS" basis. Where there is a conflict between this document and Medicare source materials, the Medicare source materials will apply.

You are responsible for submission of accurate claims. Medicare Advantage Policy Guidelines are intended to ensure that coverage decisions are made accurately based on the code or codes that correctly describe the health care services provided. UnitedHealthcare Medicare Advantage Policy Guidelines use Current Procedural Terminology (CPT®), Centers for Medicare and Medicaid Services (CMS), or other coding guidelines. References to CPT® or other sources are for definitional purposes only and do not imply any right to reimbursement or guarantee claims payment.

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\*For more information on a specific member's benefit coverage, please call the customer service number on the back of the member ID card or refer to the [Administrative Guide](#).