

Clinical overview

Definition

The bones of the spinal column are called vertebrae (plural) (vertebra – singular). A vertebral fracture is a break in a bone of the spine.

Types

- **Compression fracture** – Vertebral bone tissue collapses within itself, becoming squashed or compressed.
- **Burst fracture** – A more severe form of compression fracture in which the vertebra breaks in multiple directions.
- **Vertebral fracture-dislocation** – An unstable injury involving bone and/or soft tissue in which a vertebra moves off an adjacent vertebra (displacement). This type of injury can cause serious spinal cord compression.

Causes

Vertebral fractures can be traumatic, pathologic or both.

- **Traumatic** – caused by trauma or injury (for example, a patient falls and lands on his or her feet or buttocks. This causes downward pressure on the spinal column. The downward compressive force on the spine may be too great for the vertebrae to handle, causing one or more of the vertebrae to fracture.)
- **Pathologic** – caused by a disease process that weakens the bone, for example:
 - Osteoporosis (most common cause)
 - Tumors/cancers that started in the bones of the spine or tumors/cancers that started in other parts of the body and then spread to the bones of the spine
 - Other disease processes that weaken the bones of the spinal column
- **Both** – occurs when the bones of the spine are weakened by a disease process to the point that even minor injury or trauma causes a compression fracture. (Only the physician can determine that a fracture is out of proportion to the degree of trauma and is considered pathologic.)

Diagnostic tools

- Medical history and physical exam
- Imaging tests: spine X-ray, CT scanning and MRI
- Bone density testing for osteoporosis

Symptoms

There may be no symptoms. Symptoms may include:

- Back pain with sudden or chronic onset
- Loss of height
- Hunchback (kyphosis), which can occur with multiple fractures. (Kyphosis can cause pressure on the spinal cord that can rarely cause neurological symptoms, such as numbness, tingling or weakness; problems with walking; or problems with bowel or bladder function.)

Treatment

- Pain medications
- Bed rest
- Back bracing (sometimes used)
- Physical therapy
- Surgery
- Treatment of underlying condition (if pathologic fracture)

Potential complications

Complications can occur related to bed rest and immobility, such as:

- Blood clots
- Pulmonary embolism
- Pneumonia
- Pressure ulcers

Some of the surgical complications that can occur:

- Bleeding
- Infection
- Spinal fluid leaks
- Instrument failure
- Malunion
- Nonunion

Sequelae/late effects

A sequela (sequelae – plural) is a late effect – a residual condition produced after the acute phase of an illness or injury has ended. The sequela/residual condition may be apparent early or it may occur months or years later. Examples of sequelae of vertebral fractures include kyphosis (hunchback), spinal stenosis, prolonged chronic pain and spinal arthritis.

Prognosis

Most traumatic fractures heal in eight to 10 weeks with conservative treatment. Healing time will be slower if surgery is performed. Fractures related to osteoporosis usually become less painful with conservative management, but sometimes chronic pain and disability occur. The prognosis for vertebral compression fractures due to tumors depends on the type of tumor involved.

Documentation tips for physicians

Subjective

In the subjective section of the office note, document any current symptom related to vertebral fracture(s).

Objective

The objective section of the office note should include current associated physical exam findings and results of neurological testing and diagnostic imaging.

Final assessment/impression

- Use all applicable descriptors, as in:

Specific vertebral location (site/level)	Wedge compression	Unstable burst
Acute	Chronic	Stable burst
Displaced	Nondisplaced	Collapsed
Traumatic	Nontraumatic	Pathologic
Open	Closed	

- Document the cause of the fracture(s).
 - If traumatic, specify the type of injury or trauma, and when the injury occurred, if known.
 - If pathologic, clearly link the fracture to the underlying causative disease process. ALERT: In the ICD-10-CM classification, there is no default to either traumatic or pathological. Coders are advised to query the physician for clarification when the documentation does not clearly indicate whether the fracture is traumatic or pathological.
- Do not use the descriptor “history of” to describe a current vertebral fracture. In diagnosis coding, the phrase “history of” means the condition is historical and no longer exists as a current problem.
- A past vertebral fracture that has healed and no longer exists should not be documented in the final impression as if it is still current. In this scenario, it is appropriate to use the descriptor “history of.”
- Do not document a suspected vertebral fracture as if it were confirmed. Rather, document the signs and symptoms in the absence of a confirmed diagnosis.
- For a confirmed current vertebral fracture, do not use descriptors that imply uncertainty (such as “probable,” “apparently,” “likely” or “consistent with”).
- Document the current status (improving, unchanged, healed, etc.; or with complications such as delayed healing, nonunion or malunion).

Episode of care

The encounter note should clearly indicate the episode of care (i.e., initial, subsequent or sequela). Include the date of initial evaluation and a chronology of diagnosis and

treatment of the fracture. See seventh-character descriptions on the following pages.

Treatment plan

Document a specific and concise treatment plan.

- If referrals are made or consultations requested, the office note should indicate to whom or where the referral or consultation is made or from whom consultation advice is requested.
- Document when the patient will be seen again.

Documentation and coding examples

Example 1

Final diagnosis	Age-related osteoporosis with newly diagnosed L1 and L2 lumbar wedge compression fractures
ICD-10-CM code	M80.08xA Age-related osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture

Example 2

Final diagnosis	Severe lumbar spinal stenosis due to history of traumatic wedge compression fractures of fourth and fifth lumbar vertebrae
ICD-10-CM codes	M48.061 Spinal stenosis, lumbar region S32.040S Wedge compression fracture of fourth lumbar vertebra, sequela S32.050S Wedge compression fracture of fifth lumbar vertebra, sequela

Example 3

Final diagnosis	Routine follow-up visit for healing T2 pathological vertebral fracture
ICD-10-CM code	M84.48xD Pathological fracture, other site, subsequent encounter for fracture with routine healing

Example 4

Final diagnosis	Severe thoracolumbar kyphosis due to past thoracic and lumbar vertebral compression fractures
ICD-10-CM codes	M40.15 Other secondary kyphosis, thoracolumbar region M48.48xS Pathological fracture, other site, sequela of fracture.

ICD-10-CM tips and resources for coders

Coding basics

For accurate and specific diagnosis code assignment, the coder must:

- Review the entire medical record.
- Note the exact description of the vertebral fracture(s) documented in the medical record; then, according to ICD-10-CM official coding conventions and guidelines:
 - a) Search the alphabetic index for that specific description.
 - b) Verify the code in the tabular list, carefully following all instructional notes.

The principles of multiple coding of injuries should be followed in coding fractures.

A fracture not indicated as open or closed is coded to closed. A fracture not indicated whether displaced or not displaced is coded to displaced. Multiple fractures are sequenced in accordance with the severity of the fracture.

Traumatic vertebral fractures

Traumatic vertebral fractures are coded in accordance with the provisions within categories S12, S22 and S32 and the level of detail documented in the medical record.

Traumatic vertebral fractures classify as follows:

Vertebral level	Subcategories
Cervical	S12.00 – S12.69
Thoracic	S22.00 – S22.08
Lumbar	S32.0 – S32.05
Sacral	S32.10 – S32.19
Coccyx	S32.2

These subcategories include multiple instructional notes that must be carefully reviewed and applied as appropriate.

Fifth and sixth characters specify the particular site within each vertebral region of the spinal column and the type of fracture. There are many descriptors within each subcategory. A seventh character is added to specify the encounter as follows:

- A: initial encounter for closed fracture
- B: initial encounter for open fracture
- D: subsequent encounter for fracture with routine healing
- G: subsequent encounter for fracture with delayed healing
- K: subsequent encounter for fracture with nonunion
- S: sequela

Initial encounter – active treatment of traumatic vertebral fracture (seventh characters A and B)

- Seventh characters A and B are used for each encounter in which the patient is receiving active treatment for traumatic vertebral fracture (including patients who delayed seeking treatment for the fracture or nonunion):
 - A: Initial encounter for closed fracture
 - B: Initial encounter for open fracture
- Examples of active treatment: surgical treatment, emergency department encounter, evaluation and continuing (ongoing) active treatment by the same or a different physician.

While a patient may be seen by a new or different physician over the course of treatment for an injury, assignment of the seventh character is based on whether the patient is undergoing active treatment and not whether the physician is seeing the patient for the first time.

Subsequent encounter – routine aftercare of traumatic vertebral fracture (seventh character D)

This describes care given after the patient has completed active treatment of the fracture and is receiving routine care for the fracture during the healing or recovery phase. The seventh-character extension is:

D: subsequent encounter for fracture with routine healing

Examples of routine traumatic fracture aftercare: brace adjustment, X-ray to check healing status of fracture, medication adjustment and follow-up visits that occur after active fracture treatment has been completed.

The aftercare Z codes should not be used for aftercare for traumatic fractures.

Complications of traumatic vertebral fracture – seventh characters G and K

Care for complications of surgical treatment of traumatic vertebral fracture repairs during the healing or recovery phase are reported with the appropriate complication codes. Care of complications such as delayed union and nonunion is reported with seventh characters as follows:

- G: subsequent encounter for fracture with delayed healing
- K: subsequent encounter for fracture with nonunion

ICD-10-CM tips and resources for coders

Complications of traumatic vertebral fracture – seventh characters G and K (continued)

For complication codes, active treatment refers to treatment for traumatic vertebral fracture described by the code, even though it may be related to an earlier vertebral fracture. For example:

Code T84.63xA, infection and inflammatory reaction due to internal fixation device of spine, initial encounter, is used when active treatment is provided for the infection, even though the condition relates to the internal fixation device of the spine that was placed at a previous encounter.

Sequela of traumatic vertebral fracture – seventh character S

A sequela is a late effect – a residual condition produced after the acute phase of a vertebral fracture has ended. There is no time limit on when a sequela code can be used. The sequela may be apparent early, or it may occur months or years later. Sequelae are reported with seventh-character assignment as follows:

S: sequela

- Examples include kyphosis, spinal stenosis, prolonged chronic pain and spinal arthritis.
- Use both the traumatic vertebral fracture code and the code for the sequela itself. S is added only to the fracture code, not the sequela code.
- The specific type of sequela (e.g., kyphosis) is sequenced first, followed by the fracture code.

Pathological vertebral fractures

Pathological vertebral fractures are coded according to the provisions within the following subcategories and the level of detail documented in the medical record.

M80.08	Age-related osteoporosis with current pathological fracture, vertebra(e) x7th
M80.88	Other osteoporosis with current pathological fracture, vertebra(e) x7th
M84.48	Pathological fracture, other site x7th
M84.58	Pathological fracture in neoplastic disease, other site x7th (code also underlying neoplasm)
M84.68	Pathological fracture in other disease, other site x7th (code also underlying condition)

Review and follow instructional notes as appropriate.

Pathological vertebral fractures – continued

As noted, each subcategory requires a sixth-character placeholder (x), plus a seventh character to specify the encounter as follows:

A: initial encounter for fracture

D: subsequent encounter for fracture with routine healing

G: subsequent encounter for fracture with delayed healing

K: subsequent encounter for fracture with nonunion

P: subsequent encounter for fracture with malunion

S: sequela

Pathological fracture due to neoplasm

- For pathological fracture due to a neoplasm, when the focus of treatment is the fracture, a code from subcategory M84.5, pathological fracture in neoplastic disease, should be sequenced first, followed by the code for the neoplasm.
- When the focus of treatment is the neoplasm with an associated pathological fracture, the neoplasm code should be sequenced first, followed by a code from M84.5 for the pathological fracture.

Initial encounter – active treatment of pathological vertebral fracture (seventh character A)

- As long as the patient is receiving active treatment for the fracture, apply the following seventh character:
A: initial encounter for fracture
- Examples of active treatment: surgical treatment, emergency department encounter, evaluation and continuing treatment by the same or a different physician.

While a patient may be seen by a new or different physician over the course of treatment, seventh-character assignment is based on whether the patient is undergoing active treatment and not whether the physician is seeing the patient for the first time.

Subsequent encounter – routine aftercare of pathological vertebral fracture (seventh character D)

This describes care given after the patient has completed active treatment of the fracture and is receiving routine care for the fracture during the healing or recovery phase. The seventh-character extension is:

D: subsequent encounter for fracture with routine healing

ICD-10-CM tips and resources for coders

Subsequent encounter – routine aftercare of pathological vertebral fracture (seventh character D) – continued

- Examples of routine pathological fracture aftercare: brace adjustment, X-ray to check healing status of fracture, medication adjustment, follow-up visits that occur after active fracture treatment has been completed.

Complications of pathological vertebral fracture – seventh characters G, K and P

- Care for complications of surgical treatment of pathological vertebral fracture during the healing or recovery phase should be coded with the appropriate complication codes.
- Care of complications of pathologic fractures are reported with the appropriate seventh character as follows:
 - G: subsequent care with delayed union
 - K: subsequent care with nonunion
 - P: subsequent care with malunion

Sequela of pathological vertebral fracture (seventh character S)

A sequela is a late effect – a residual condition produced after the acute phase of a vertebral fracture has ended. There is no time limit on when a sequela code can be used. The sequela may be apparent early or it may occur months or years later. Sequelae are reported with seventh-character assignment as follows:
S: sequela

- Examples include kyphosis, spinal stenosis, prolonged chronic pain and spinal arthritis.
- Use both the pathological vertebral fracture code and the code for the sequela itself. S is added only to the fracture code, not the sequela code.
- The specific type of sequela (e.g., kyphosis) is sequenced first, followed by the fracture code.

History of vertebral fractures

A vertebral compression fracture that occurred in the past and for which there are no current symptoms, treatment, complications or sequelae is coded as follows:

Z87.31Ø	Personal history of (healed) osteoporosis fracture
Z87.311	Personal history of (healed) other pathologic fracture
Z87.81	Personal history of (healed) traumatic fracture

References: American Academy of Orthopaedic Surgeons; American Hospital Association Coding Clinic; ICD-10-CM Official Guidelines for Coding and Reporting; MedlinePlus