Vertebral fractures

ICD-10-CM

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; however, symptoms can include:

- Back pain with sudden onset or chronic back pain
- 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.

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Best documentation practices for physicians

Subjective

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

Objective

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

Assessment

Specificity: Describe vertebral fractures to the highest level of specificity, including all of the following:

- Site / affected level of spinal column
- Type of fracture, for example:

Open	Closed
Acute	Chronic
Collapsed	Wedge compression
Stable burst	Unstable burst
Displaced	Nondisplaced

- 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: It is critical that the medical record document whether a fracture is traumatic versus pathologic. Without this clear specification, there is no coding path or default in the ICD-10-CM classification and no code can be assigned.
- Current status (improving, unchanged, healed, etc., or with complications such as delayed healing, nonunion or malunion).

Current versus historical:

- Avoid use of the descriptor "history of" to describe a current vertebral fracture. In diagnosis coding, "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."

Suspected versus confirmed:

- 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."

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 7th character descriptions on the following pages.**

Plan

Document a specific and concise treatment plan. For example, bedrest, back bracing, physical therapy, pain medications clearly linked to the fracture diagnosis.

- Include orders for diagnostic testing as appropriate.
- Indicate to whom referrals are made or consultations requested.
- Document when the patient will be seen again.

Electronic health record (EHR) issues

Other and unspecified codes with descriptions:

Some electronic health records (EHRs) insert ICD-10-CM codes with corresponding descriptions into the assessment section of an office note to represent the final diagnosis. For example:

S32.Ø18A Other fracture of first lumbar vertebra, initial encounter for closed fracture

S22.ØØ9D Unspecified fracture of unspecified thoracic vertebra, subsequent encounter for fracture with routine healing

These are vague descriptions and incomplete diagnoses.

- Codes titled "other" or "other specified" are for use when the medical record provides a specific diagnosis description for which a specific code does not exist.
- The "other" ICD-10-CM code with description should not be used, by itself, as a final diagnosis without clear documentation that specifies the particular "other" condition.
- Unspecified diagnosis descriptions should be used only when sufficient clinical information is not known or available to the provider at the time of the encounter.

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Best documentation practices for physicians

Mismatch between final diagnostic statement and EHR-inserted diagnosis code with description:

Another scenario that causes confusion is one in which the assessment section documents a provider-stated diagnosis *PLUS* an EHR-inserted diagnosis code with description that does not match or may even contradict the stated diagnosis. Example:

> **Assessment:**
> **Traumatic T12 compression fracture, healing well**
> S22.Ø8ØG Wedge compression fracture of T11-T12 vertebra, subsequent encounter for fracture with delayed healing

In this example, the provider's final diagnosis in bold does not match the EHR-inserted diagnosis code with description.

To avoid confusion and ensure accurate diagnosis code assignment, the provider-stated final diagnosis must either:

a) Match the code with description; or
b) It must classify in ICD-10-CM to the EHR-inserted diagnosis code with description.

Note: ICD-10-CM is a statistical classification; it is not a substitute for a provider's final diagnostic statement. It is the healthcare provider's responsibility to provide legible, clear, concise and complete documentation of the final diagnosis to the highest level of specificity, which is then translated to a code for reporting purposes. It is not appropriate for healthcare providers to simply list a code number or select a code number from a list of codes in place of a written final diagnosis.
Reference: AHA Coding Clinic guideline Code number in lieu of a diagnosis, Fourth Quarter 2015, Pages 34-35

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Tips and resources for coders

Coding basics

For accurate and specific diagnosis code assignment, review the entire medical record and note the provider's exact description of the vertebral fracture(s). Then, according to ICD-10-CM official coding conventions and guidelines:

- Search the alphabetic index for that specific description.
- 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.ØØ – S12.69, S12.9
Thoracic	S22.ØØ – S22.Ø8
Lumbar	S32.ØØ – S32.Ø5
Sacral	S32.1Ø – S32.19
Coccyx	S32.2

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

5th and 6th 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 7th character is added to report 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 (7th 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 7th 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 healing of traumatic vertebral fracture (7th 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 7th character extension is:

D: subsequent encounter for fracture with routine healing

Examples of routine traumatic fracture care: 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 7th characters G and K

Care for *complications of the traumatic vertebral fracture itself* during the healing or recovery phase is reported by adding the appropriate 7th character to the fracture code as follows:

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

By contrast, care for *complications of surgical treatment of the traumatic vertebral fracture* is reported with the appropriate surgical complication code with its own corresponding 7th character as indicated by the medical record documentation. For active treatment of the surgical complication, the complication code is sequenced first with 7th character "A". Active treatment refers to active treatment of the surgical complication even though the complication relates to a procedure performed at a previous encounter. *(See Example 3 on page 6 of 6)*

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Tips and resources for coders

Sequela of traumatic vertebral fracture – 7th character S

A sequela is a late effect – a residual condition produced after the acute phase of a vertebral fracture has ended. The sequela may be apparent early, or it may occur months or years later. There is no time limit on when a sequela code can be used. Sequelae are reported with 7th character S: sequela.

- 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.
- Examples include kyphosis, spinal stenosis, prolonged chronic pain and spinal arthritis.

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.

M8Ø.Ø8 Age-related osteoporosis with current pathological fracture, vertebra(e) x7th

M8Ø.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.

As noted, each subcategory requires a sixth-character placeholder (x), plus a 7th 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, is 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 is sequenced first, followed by a code from M84.5 for the pathological fracture.

Initial encounter – active treatment of pathological vertebral fracture (7th character A)

As long as the patient is receiving active treatment for the fracture, apply the following 7th 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, 7th 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 (7th 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 7th character extension is:

D: subsequent encounter for fracture with routine healing

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 – 7th characters G, K and P

Care for *complications of the pathological vertebral fracture itself* during the healing or recovery phase is reported by adding the appropriate 7th character to the fracture code as follows:

G: subsequent care with delayed healing
K: subsequent care with nonunion
P: subsequent care with malunion

By contrast, care for *complications of surgical treatment of the pathological vertebral fracture* is reported using the appropriate surgical complication code with its own corresponding 7th character as indicated by the medical record documentation. For active treatment of the surgical complication, the complication code is sequenced first with 7th character “A”. Active treatment refers to active treatment of the surgical complication even though the complication relates to a procedure performed at a previous encounter. *(See Example 4 on page 6 of 6)*

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Tips and resources for coders

Sequela of pathological vertebral fracture 7th 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 7th 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. 7th character 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

Coding examples

Example 1	
Final diagnosis	Initial visit for age-related osteoporosis with newly diagnosed L1 and L2 lumbar wedge compression fractures
ICD-10-CM code	M8Ø.Ø8xA 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 code	M48.Ø61 Spinal stenosis, lumbar region without neurogenic claudication S32.Ø4ØS Wedge compression fracture of fourth lumbar vertebra, sequela S32.Ø5ØS Wedge compression fracture of fifth lumbar vertebra, sequela

Example 3	
Final diagnosis	3 months post-op traumatic burst fracture at T10, now with nonunion due to implant failure (screw pull out). Will schedule revision surgery to extend level of fixation.
ICD-10-CM code	T84.226A Displacement of internal fixation device of vertebrae, initial encounter S22.Ø71K Stable burst fracture of T9-T10 vertebrae, subsequent encounter for fracture with nonunion

Example 4	
Final diagnosis	Age-related osteoporotic lumbar compression fracture at L2 status post L2 vertebroplasty 4 weeks ago. Now complains of lower extremity weakness. Imaging shows delayed healing due to epidural and intradural leakage of bone cement. Plan: Schedule L1 and L2 laminotomy to remove bone cement.
ICD-10-CM code	T84.498A Other mechanical complication of other internal orthopedic devices, implants and grafts, initial encounter M8Ø.Ø8xG Age-related osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with delayed healing l

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