Fractures
ICD-10-CM

In ICD-10-CM, fractures fall under two main chapters:
- Chapter 13, "Diseases of the Musculoskeletal System and Connective Tissue (M00–M99)"
- Chapter 19, "Injury, Poisoning, and Certain Other Consequences of External Causes (S00–T88)"

ICD-10 characteristics

Most of the codes in chapter 13 contain site and laterality designations.
- **Site:** The site represents either the bone, muscle or joint involved.
  - Some codes have an option for multiple sites to use when a diagnosis involves more than one bone, muscle or joint.
  - When there is not a multiple sites option and more than one bone, muscle or joint is involved, individual codes must be used to identify the different sites involved.
- **Laterality:** Laterality identifies whether the condition occurs on the left or right side, or it is bilateral.
  - If a condition is bilateral and a bilateral code is not available, assign separate codes for both the left and right side.

Combination codes

There are combination codes where a single code is used to classify two diagnoses, or a diagnosis with an associated secondary process (manifestation) or complication. For example, age-related osteoporosis with current pathological fracture, unspecified site, initial encounter for fracture (M80.00XA).

Expansion

Due to the need for greater detail, fracture codes were expanded. For example, ICD-9-CM code for closed fracture of one or more phalanges of foot (826.0) maps to several ICD-10-CM codes, which further identifies the fracture type, site, and laterality.

About fractures
- Fractures in ICD-10-CM have gone through a substantial amount of change that requires documentation to identify details such as:
  - Pathological versus traumatic.
  - Precise site of the fracture.
  - Laterality.
  - Episode of care.
  - Open versus closed (if not indicated, fractures are coded as closed).
  - Displaced versus non-displaced (if not indicated, fractures are coded as displaced).
- The ICD-10-CM alphabetic index has two main entries for fracture: pathological and traumatic.
- Many musculoskeletal conditions are a result of previous injury or trauma to a site, or are recurrent conditions. If recurrent, they are usually found in chapter 13. Any current, acute injury should be coded to the appropriate injury code from chapter 19.
- If treatment is directed to a current injury, coders should not use the Z series of codes for aftercare. The injury code should be reported with the appropriate seventh character extension to identify the subsequent encounter. The purpose of assigning the extension is to be able to track the continuity of care and the type of injury.

Causes for pathologic fractures

In ICD-10-CM, there are three causes identified for pathologic fractures:
- **Neoplastic disease:** "When an encounter is for a pathological fracture due to a neoplasm, and 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. If 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." (*ICD-10-CM Coding Guidelines*)
- **Other specified disease:** Other specified disease may include Paget's disease, disuse atrophy, hyperparathyroidism, and nutritional or congenital disorders.

- **Osteoporosis:** Osteoporosis is a systemic condition indicating that all bones of the musculoskeletal system are affected. It is the most common type of bone disease. Osteoporosis has two main categories in ICD-10:
  - **Osteoporosis without pathological fracture:** Category M81 is used for patients who have osteoporosis that do not currently have a pathologic fracture (due to the osteoporosis) even if they have had a fracture in the past. Location is not a component of these codes. For patients with a history of osteoporosis fracture, status code Z87.310, personal history of (healed) osteoporosis fracture, should come after the code from M81.
  - **Osteoporosis with current pathological fracture:** Category M80 is used for patients who have a current pathologic fracture at the time of the encounter. The codes under M80 identify the site of the fracture, not the osteoporosis. A code from category M80, not a traumatic fracture code, should be used for any patient with known osteoporosis who suffers a fracture even if the patient had a minor fall or trauma (that would typically not break a healthy bone).

The seventh character

Certain ICD-10-CM categories require the assignment of a seventh character. The seventh character will always occupy the seventh character in the data field. For codes that are less than six characters, a placeholder X must be used to fill in for the empty characters.

For most injuries, the seventh character refers to the episode of care identifying initial encounter (A), subsequent encounter (D) and sequela (S).

For fractures, the episode of care is more complex as it provides additional detail about the fracture such as: open or closed, routine or delayed healing phase, nonunion, malunion, and sequela.

7th character	Types of encounter	To be used
A, B, C	Initial encounter for fracture	When the patient is receiving active treatment for the injury (e.g., surgical treatment or emergency department encounter).
D, E, F	Subsequent encounter for fracture with routine healing	When the patient has received and completed active treatment of the injury and is receiving routine care during the healing or recovery phase (e.g., cast change or removal, medication adjustment, removal of external or internal fixation device, or other aftercare and follow-up visits).
G, H, J	Subsequent encounter for fracture with delayed healing	
K, M, N	Subsequent encounter for fracture with nonunion	
P, Q, R	Subsequent encounter for fracture with malunion	
S	Sequela	For complications or conditions that arise as a direct result of an injury (e.g., scar formation after a burn). When using 7th character "S", code both the injury that caused the sequela and the sequela itself, sequence the exact type of sequela (e.g., scar) first, followed by the injury code.

Injuries

ICD-10 allows for the capture of more specific injury codes. In chapter 19, the S-section for coding is organized by the general site of the injury, then by the injury type beginning with more superficial injuries and ending with injures involving deeper body structures. It is important to note that secondary code(s) from chapter 20, "External causes of morbidity," are needed to identify the external cause of injury unless the code already includes the external cause as some do in the T-section.

Examples:

- **By anatomic location:** Displaced fracture of medial phalanx of right index finger; initial encounter for closed fracture (S62.620A)
- **By type:** (like contusion, foreign body, wound) — Puncture wound with foreign body, right foot; initial encounter (S91.341A)
- **Sequela:** (complication or condition that arises as a direct result of the injury) — Displaced subtrochanteric fracture of left femur; sequela (S72.22XS)

Classification for open fractures

In ICD-10-CM, certain open fracture codes require a 7th character that is categorized using the Gustilo classification. This is the most widely used structure and is generally accepted as the primary classification system for open fractures. This classification is not for all bones or all types of fractures.

If an open fracture is not specified with the Gustilo classification type, the 7th character type I or II for open fracture should be assigned. The medical record must provide the necessary detail to allow the coder to assign the most appropriate 7th character, as this character is not optional.

Gustilo classification for open fracture of extremities

Type I	• Low-energy/velocity • Clean wound • Wound <1 cm in length • Soft tissue injury and fracture comminuted are minimal.
Type II	• Contamination and soft tissue damage (flaps, avulsion) is moderate. • Wound >1 cm in length • Minimal fracture comminuted
Type III	• High-energy/velocity or crushing (i.e., injuries due to farm accidents, gunshot, war, tornado, high-speed vehicle) • Massive/highly contaminated wound • Wound >1 cm in length • Extensive soft tissue damage/loss (flaps, avulsion, crush) that requires vascular repair or has been open for eight hours prior to treatment • Segmental or severely comminuted fracture with displacement, bone loss, traumatic amputation
Grade III A	• Wound <10 cm • Soft tissue coverage of bone is usually possible
Grade III B	• Wound >10 cm • Soft tissue is inadequate and requires regional or free flap
Grade III C	• Fracture with a major vascular injury requiring repair for limb salvage

References

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