

# Deep vein thrombosis (DVT)

ICD-10-CM

Clinical overview

## Definitions

- **Deep vein thrombosis (DVT):** The presence of a blood clot in a deep vein
- **Thrombophlebitis:** Inflammation of a vein caused by or associated with a blood clot
- **Thrombus:** A blood clot that develops inside a blood vessel and stays in place
- **Embolus:** A blood clot that develops inside a blood vessel and subsequently breaks loose and travels to another location
- **Pulmonary embolus (embolism):** A deep vein thrombosis that breaks loose and travels to the lungs

## Additional background

A blood clot occurs when blood thickens from a liquid state and hardens into a solid mass.

Most blood clots form in the lower extremities, but they can form in the upper extremities or other locations.

Blood clots can form in superficial veins that are close to the surface, but these are usually not dangerous, as they do not break loose and travel to other locations.

## Causes

- Damage to the inner lining of a vein (due to injury, inflammation, immune response, etc.)
- Sluggish blood flow (due to prolonged inactivity, such as immobility after surgery or prolonged sitting while traveling)
- Any condition that causes blood to be thicker than normal (e.g., certain medications or medical conditions that increase blood clotting)

## Signs and symptoms of current DVT/thrombophlebitis

Often, there are no signs or symptoms. Typically, signs and symptoms develop when there is inflammation associated with the deep vein thrombosis (this is known as thrombophlebitis). These symptoms may include:

- Edema (swelling) of affected extremity
- Pain or tenderness in the affected extremity (positive Homans' sign – pain in the calf or behind the knee with passive flexion of the foot in an upward direction – may indicate the presence of a deep vein thrombosis)
- Increased warmth or redness

## Diagnostic tools

- Medical history and physical exam
- Ultrasound/Doppler
- Venography (dye is injected into the vein followed by X-ray of the extremity)
- D-dimer test (measures a substance in the blood that is released when a blood clot dissolves)
- MRI and CT scanning are used less frequently

## Main goals of treatment

- Prevent blood clot from enlarging
- Prevent blood clot from breaking loose and traveling to another location
- Prevent future blood clots

## Treatment

### Medications

- Anticoagulants (blood thinners) decrease the blood's clotting ability and prevent existing clots from getting bigger (blood thinners do not break up existing clots; existing clots usually dissolve with time). Anticoagulant therapy may be used for three to six months or longer, or indefinitely, to prevent recurrence of blood clots. Anticoagulants include:
  - Heparin – acts immediately to thin the blood
  - Coumadin/warfarin – starts to work within three to four days
  - Low-molecular-weight heparins (enoxaparin/Lovenox, dalteparin/Fragmin or tinzaparin/Innohep)
  - Newer drug therapies, such as rivaroxaban (Xarelto) and apixaban (Eliquis)
- Thrombin inhibitors interfere with the blood-clotting process; they may be used for patients who cannot take heparin.
- Thrombolytics break up blood clots quickly; they are used only in life-threatening situations, as they can cause sudden bleeding.

### Compression stockings

**Vena cava filter** (to catch clots that break loose to prevent them from traveling to the lungs or other locations)

**Surgery to remove clot** (rarely used)

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Best documentation practices for physicians

## Subjective

The subjective section of the office note should document the presence of any current symptoms related to deep vein thrombosis (e.g., pain, swelling, redness, etc.).

## Objective

The objective section of the office note should include any current associated physical exam findings (e.g., edema, redness, warmth, related diagnostic testing results, etc.).

## Assessment

### Specificity:

Describe each final diagnosis to the highest level of specificity, for example:

- Acute versus chronic
- Recurrent
- Exact location
  - Upper or lower extremity, calf, thigh, etc.
  - Laterality (left, right or bilateral)
  - Affected vein (femoral, tibial, etc.)

### Abbreviations:

A good rule of thumb for any medical record is to limit—or avoid altogether—the use of abbreviations. While DVT is a commonly accepted medical abbreviation for deep vein thrombosis, best documentation practice is as follows:

- The initial notation of an abbreviation should be spelled out in full with the abbreviation in parentheses—e.g., “deep vein thrombosis (DVT).”
- Subsequent mention of the condition can be made using the abbreviation or acronym.
- The diagnosis should be spelled out in full in the final assessment.

### Acute versus chronic

The American Heart Association advises generally a thrombus is referred to as “acute” within the first two weeks after the thrombus forms; “subacute” when more than two weeks and potentially up to six months after thrombus forms; or “chronic” once the thrombus is more than six months old.

- However, a coder cannot apply these time frames to determine whether to code DVT as acute or chronic.
- Rather, code assignment is strictly based on the specific DVT description documented by the provider in the medical record.

### Current versus “history of”

- A current DVT should not be described anywhere in the record as “history of” DVT. In diagnosis coding, the description “history of” means DVT is historical and no longer exists.
- A deep vein thrombosis that occurred in the past and is no longer present should not be documented in the final assessment as if it is current (assessment: “DVT”). Rather, in this scenario, it is appropriate to describe DVT as “history of” along with specification that the condition is no longer current.

### Suspected versus confirmed

- Do not document a suspected deep vein thrombosis as if it were confirmed. Instead, document the signs and symptoms in the absence of a confirmed diagnosis.
- Do not describe a confirmed DVT with terms that imply uncertainty (such as “probable,” “apparently,” “likely” or “consistent with”).

## Plan

Document a specific and concise treatment plan for DVT, including the purpose of any associated long-term anticoagulant therapy and the date of the patient’s next appointment.

### Long-term (current) anticoagulant therapy

Current long-term anticoagulant treatment related to DVT should be clearly linked to the DVT diagnosis with clear indication of the purpose of this therapy in the individual case, i.e., active treatment of a current DVT versus prophylactic treatment related to a historical DVT (to prevent a recurrence).

- Chronic anticoagulant therapy does not equal a diagnosis of chronic DVT; and current chronic anticoagulation therapy does not make a DVT chronic.
  - Anticoagulation therapy is a medical treatment; whereas chronic DVT is a medical condition.
  - Further, chronic anticoagulation therapy is a long-term treatment that can be used for both current and historical DVTs.
- Chronic anticoagulant therapy does not represent a coagulation defect.
  - The blood-thinning action of the anticoagulant is the desired therapeutic effect of the medication and should not be coded as a coagulation defect.

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## DVT versus thrombophlebitis

DVT can occur with or without inflammation.

- Deep vein thrombosis is rarely an acute finding without the associated inflammation that occurs with thrombophlebitis.
- Do not document simply “DVT” when there is also associated thrombophlebitis. Document both conditions to the highest level of specificity. Example: “Acute DVT of the right femoral vein with associated thrombophlebitis.”

## Electronic health record (EHR) issues

Some electronic health records insert ICD-10-CM codes with descriptions into the medical record to represent the final diagnosis.

Example: “**I82.599** Chronic embolism and thrombosis of other specified deep vein of unspecified lower extremity.”

With these types of vague descriptions, the diagnosis will not be complete unless the provider clearly documents the particular deep vein(s) that are affected and laterality (right lower extremity, left lower extremity or bilateral lower extremities).

## ICD-10-CM Official Guidelines for Coding and Reporting, Section I.A.9.a – “Other and unspecified codes”:

Codes titled “other” or “other specified” are for use when the information in the medical record provides a specific diagnosis description for which a specific code does not exist.

- Alphabetic Index entries in the coding manual with NEC (not elsewhere classified) in the line designate “other” codes in the Tabular List.
- These Alphabetic Index entries and “other” codes in the Tabular List represent specific disease entities for which no specific code exists so the term is included within an “other” code.
- The “other” ICD-10-CM code with description should not be used, by itself, as a final diagnosis without clear documentation of the particular “other” condition. In the case of the example above, best practice is for the provider to specify the “other” affected deep vein that does not have its own code (along with laterality).

Another scenario that causes confusion is one in which the assessment section of an office note 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: Recurrent DVT right femoral vein

**I82.519** Chronic embolism and thrombosis of unspecified femoral vein

In this scenario, the final diagnosis in bold in the Assessment does not match the 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 healthcare provider’s final diagnostic statement. It is the healthcare provider’s responsibility to offer legible, clear, concise and specific documentation of each final diagnosis described 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.

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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 DVT or DVT-related condition. Then, in accordance with ICD-10-CM official coding conventions and guidelines:

- Search the alphabetic index for that specific description.
- Verify the code in the tabular list, following all instructional notes.

## Phlebitis and thrombophlebitis

- Phlebitis and thrombophlebitis of deep vessels of the lower extremities classify to category **I80**. Fourth, fifth and sixth characters specify the exact location, including the blood vessel affected and laterality. Be sure to review all instructional notes.
- Category **I80** excludes (**Excludes1**) venous embolism and thrombosis of lower extremities (**I82.4-**, **I82.5-**, **I82.81-**). An **Excludes1** note indicates that the code excluded should not be used at the same time as the code above the **Excludes1** note.
- When a final diagnosis is stated simply as "DVT" but the body of the record documents signs and symptoms that are associated with thrombophlebitis (swelling, erythema, pain and induration), the physician should be queried for clarification and an addendum/correction created when indicated.

## Deep vein thrombosis (DVT) lower extremity – acute

- Acute embolism and thrombosis of deep veins of the lower extremities classify to subcategory **I82.4**, which includes deep vein thrombosis not otherwise specified (NOS) and DVT NOS.
- Fifth and sixth characters are required to specify the DVT location – the particular vein(s) affected and laterality (right, left, bilateral, unspecified).
- When a medical record supports a current final diagnosis stated simply as "deep vein thrombosis" or "DVT" (with no further description or specification), assign code **I82.409**, Acute embolism and thrombosis of unspecified deep veins of unspecified lower extremity.

## Deep vein thrombosis (DVT) lower extremity – chronic

- Chronic embolism and thrombosis of deep veins of the lower extremities classify to subcategory **I82.5**. Fifth and sixth characters are required to specify the particular vein affected and laterality (right, left, bilateral or, unspecified).
- There are no specific timelines for when DVT becomes chronic. Code assignment is based solely on the physician's specific description of the condition.

## Deep vein thrombosis (DVT) upper extremity

- Acute and chronic embolism and thrombosis of deep veins of the upper extremity classifies to subcategories **I82.62** (acute) and **I82.72** (chronic), with a sixth character required to specify laterality (right, left, bilateral, unspecified).

## Long-term anticoagulation therapy

- **Z79.01** is assigned for long-term (current) use of anticoagulants.
- Query the physician when a medical record documents long-term anticoagulant therapy related to DVT but does not indicate whether this therapy is being used as active treatment of a current acute, sub-acute, or chronic DVT versus prophylactic treatment of a historical DVT with the goal of preventing recurrence.
- Chronic anticoagulant therapy does not equal chronic DVT and does not represent a coagulation defect.
  - Anticoagulation therapy is a medical treatment; whereas chronic DVT is a medical condition.
  - Chronic anticoagulation therapy is a long-term treatment that can be used for both current and historical DVTs.
  - The blood-thinning action of the anticoagulant is the desired therapeutic effect of the medication and should not be coded as a coagulation defect.

## History of DVT

- **Z86.718** represents Personal history of venous thrombosis and embolism.

**References:** American Heart Association; American Hospital Association Coding Clinic; ICD-10-CM Official Guidelines for Coding and Reporting; Mayo Clinic; MedlinePlus; Merck Manual; National Heart, Lung and Blood Institute

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Tips and resources for coders

## Coding examples

Example 1	
Medical record documentation	Presents for anticoagulant follow-up for deep vein thrombosis (DVT). Exam findings are unremarkable. INR (international normalized ratio) is therapeutic at 2.8. Continue current Coumadin dose: 5mg M-W-F, 2.5 mg others. Written instructions reviewed with and given to patient. Recheck 1 month.
Final diagnosis	Long-term anticoagulant therapy for DVT
ICD-10-CM code	<b>Z97.01</b> Longterm (current) use of anticoagulants
Comments	Documentation is vague and ambiguous. The coder should query the physician for clarification regarding whether Coumadin therapy is being administered as active treatment of a current deep vein thrombosis versus prophylactic treatment of a historical deep vein thrombosis with the goal of preventing a recurrence. Without the benefit of provider query, the only code that can be assigned is <b>Z79.01</b> .  Best documentation practice is for the physician to describe the DVT to the highest level of specificity (e.g., acute, chronic, recurrent, historical, exact location including laterality).

Example 2	
Medical record documentation	Presents with chief complaint of swelling in right leg with calf tenderness for past two days. Asymmetric swelling with the right leg measuring close to 42 cm, the left measuring at 37 cm. Positive Homans' sign. Stat venous Doppler shows deep vein thrombosis in the right posterior tibial. Negative left leg venous Doppler. Started on Coumadin 5 mg daily and Lovenox 80 mg subcutaneous twice daily until international normalized ratio is therapeutic between 2 and 3.
Final diagnosis	Acute right posterior tibial DVT
ICD-10-CM code	<b>I82.441</b> Acute embolism and thrombosis of right tibial vein
Comments	Documentation clearly supports the presence of a current, acute DVT with a specific site noted. Specific documentation leads to a complete and accurate representation of the patient's condition.

Example 3	
Medical record documentation	65-year-old female presents for routine follow-up for hypertension. States home blood pressure monitor shows blood pressure running in the 120s over high 80s. Blood pressure in the office today 129/88. Reports headaches have resolved. Has history of deep vein thrombosis left leg 8 months ago; Coumadin therapy was discontinued two weeks ago. Return to office in 2 months. Continue to monitor; record home blood pressure readings and bring record to next visit.
Final diagnosis	Hypertension controlled. History of deep vein thrombosis
ICD-10-CM code	<b>I10</b> Essential (primary) hypertension <b>Z86.718</b> Personal history of other venous thrombosis and embolism
Comments	History of DVT codes to <b>Z86.718</b> .

Example 4	
Medical record documentation	Patient is here today for follow-up related to deep vein thrombosis in the left leg diagnosed four months ago. Was started on regular daily Coumadin therapy at that time. No redness or inflammation in left leg today; swelling has decreased. INR (international normalized ratio) today is 2.4. Doppler ultrasound today shows deep venous thrombosis in left leg is slowly resolving. Continue current daily Coumadin dosing as directed. Recheck INR in four weeks.
Final diagnosis	Chronic deep venous thrombosis of left lower extremity
ICD-10-CM code	<b>I82.502</b> Chronic embolism and thrombosis of unspecified deep veins of left lower extremity <b>Z79.01</b> Long term (current) use of anticoagulants
Comments	DVT is clearly described as "chronic". The provider did not specify the affected vein.