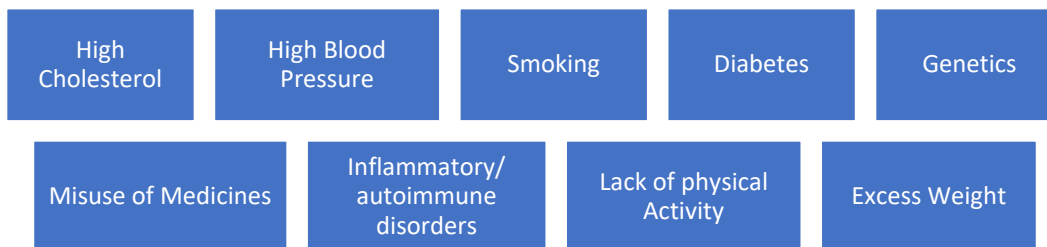# Cardiovascular Disease

According to the Cleveland Clinic, cardiovascular diseases (CDVs) are conditions that affect the heart and blood vessels. Cardiovascular disease can cause other organs and systems to be damaged because of decreased or blocked blood flow. Common causes that can lead to an increased risk of cardiovascular disease include:

High Cholesterol	High Blood Pressure	Smoking	Diabetes	Genetics

Misuse of Medicines	Inflammatory/ autoimmune disorders	Lack of physical Activity	Excess Weight

So why is this condition category so important to us as coders and clinicians? Cardiovascular diseases such as coronary artery disease, cerebrovascular disease, and peripheral arterial disease are some of the leading causes of illness and death in the United States. Cardiovascular disease accounted for 874,613 deaths in the United States in 2019, and almost half of adults in the U.S. have some form of cardiovascular disease.

Risk Adjustment and Cardiovascular Diseases

The V28 risk adjustment model has drastically reduced the number of codes that risk adjusts. In total, over 2,000 ICD-10-CM codes that were previously carrying an HCC weight will no longer carry any weight at all. Cardiovascular diseases are included, with over 190 codes in this section of the ICD-10 alone no longer mapping to an HCC category. Specificity is more important than ever to the financial health of the Federally Qualified Health Centers, as risk adjustment directly affects benchmark leakage and the bucket of shared savings that can be earned in value-based contracts.

Cardiovascular Coding Tips

Myocardial Infarction (MI) I21.-

To select the appropriate code, the following should be documented. If unknown, query the provider:

Site/Location	Dates/Timeline	Treatment Plan
• Document the **site/location** where the MI took place in the heart. • anterolateral wall, inferoposterior wall, lateral wall, subendocardial, etc. • Specify the **type of MI**- ST elevation myocardial infarction (STEMI) vs. non- ST Elevation myocardial infarction (NSTEMI). • Type 1, type 2, type 3, type 4a, type 4b, type 4c or type 5; intraoperative, postoperative, subsequent.	• A MI that is within the 4-week post-acute period is coded as an acute myocardial infarction from category **I21.-** • A MI that is **PAST** the 4-week post-acute period but is still being actively treated should be coded with the "aftercare" codes. • An MI **PAST** the 4-week post-acute period with no current symptoms or direct treatment is coded as an "old" or historical MI I25.2.	• Document the treatment plan for acute or historical MI, including orders and testing. • Link current medications being used for treatment. • If being monitored by outside clinicians, document whom or where the referrals or consult request were made to and update treatment plans as appropriate.

If a type 1 NSTEMI evolves into STEMI, code the STEMI code. Type 1 STEMI can be found in code range I21.0- I21.2, and I21.3 while Type 1 NSTEMI is coded as I21.4. If the myocardial infarction is unspecified, code I21.9 Acute myocardial infarction, unspecified is the default. An MI is PAST the 4-week post-acute period with no current symptoms or direct treatment is coded as an "old" or historical MI I25.2. In the ICD 10 Cm there is a "code also" note to add a code for exposure to tobacco smoke (Z77.2), history of tobacco dependence (Z87.891), tobacco dependence (F17.-), and tobacco use (Z72.0) if present as smoking is an associated risk factor.

Coronary Artery Disease (CAD) I25.-

There are over 40 codes for atherosclerosis of the coronary artery alone, however most of the codes in this category no longer risk adjust. CAD with unstable angina are the only remaining codes that will risk adjust, totaling up to only eight codes in the category that map to an HCC.

Diagnosis Code	Description	CMS-HCC Model **V24**	CMS-HCC Model **V28**
I25.110	Atherosclerotic heart disease of native coronary artery **with unstable angina pectoris**	87	229
I25.700	Atherosclerosis of coronary artery bypass graft(s), unspecified, **with unstable angina pectoris**	87	229
I25.710	Atherosclerosis of **autologous vein** coronary artery bypass graft(s) **with unstable angina pectoris**	87	229
I25.720	Atherosclerosis of **autologous artery** coronary artery bypass graft(s) **with unstable angina pectoris**	87	229
I25.730	Atherosclerosis of **non-autologous biological coronary artery** bypass graft(s) **with unstable angina pectoris**	87	229
I25.750	Atherosclerosis of native coronary artery of **transplanted heart with unstable angina**	87	229
I25.760	Atherosclerosis of bypass graft of coronary artery of **transplanted heart with unstable angina**	87	229
I25.790	Atherosclerosis of other coronary artery bypass graft(s) **with unstable angina pectoris**	87	229

To make the proper code selection you will need documentation on:

The cause of CAD (assumed to be atherosclerosis- but notate if other cause)

If the patient experiences angina pectoris, and if so what type:

- **Add 6th character to notate angina**: unstable (0), with spasms (1), refractory angina (2), other specified type (8), unspecified (9).

Which artery/vein is involved (if known)

- Native artery
- Autologous vein (for bypass)
- Non-autologous biological coronary artery (for bypass)

If a bypass graft is present

Heart transplant status

Presence of HTN or smoking

Cardiomyopathy I42.-

The term "cardiomyopathy" is broad and nonspecific. To code for cardiomyopathy correctly, you will need to know what type the patient has, and the status of the condition as it is currently. The main types of cardiomyopathies are Dilated, Hypertrophic, and Restrictive.

- **Dilated cardiomyopathy** starts in the heart's main pumping chamber (left ventricle) and makes it harder for the heart to pump blood to the rest of the body. This causes the heart chambers (ventricles) to thin and stretch, growing larger.
- **Hypertrophic cardiomyopathy** occurs when the heart muscle becomes thickened (hypertrophied). The thickened heart muscle can make it harder for the heart to pump blood. Many people don't realize they have it because they have few, if any, symptoms.
- **Restrictive cardiomyopathy** happens when the muscle tissue in the heart's lower chambers (ventricles) becomes stiff, and the ventricles can't fill with blood. This leads to reduced blood flow in the heart.

Documentation should also notate the status of the cardiomyopathy- is it stable, improved, or worsening to support code selection and code validation. If the status of the condition is not specified, or the type of cardiomyopathy is not specific, consider querying the provider for more information. This category of codes will risk adjust, except for cardiomyopathy due to drugs or an external agent (I42.7).

Atrial Fibrillation (Afib) I48.-

This disease category also heavily relies on specificity for appropriate code selection. The elements needed are the type of atrial fibrillation, if the afib is acute or chronic, and if the condition is currently being managed or if it has resolved. If the type of arrythmia is known, do not document and code for non-specific terms like dysrhythmia or arrhythmia.

Paroxysmal atrial fibrillation:	• Begins suddenly and stops on its own. • Symptoms range from mild to severe; can last seconds, minutes, hours or days; and can occur intermittently.
Persistent atrial fibrillation:	• Persists and does not terminate on its own within seven days. • Often requires pharmacologic or electrical cardioversion to restore normal rhythm.
Longstanding persistent:	• Persistent and continuous atrial fibrillation lasting more than twelve months.
Permanent atrial fibrillation:	• Persistent or longstanding atrial fibrillation where cardioversion cannot or will not be performed or is not indicated.
Chronic atrial fibrillation (unspecified):	• May refer to any persistent, longstanding persistent or permanent atrial fibrillation.
Chronic persistent atrial fibrillation:	• Has no widely accepted clinical definition or meaning. • American Hospital Association (AHA) Coding Clinic advises to code this description to "Other persistent atrial fibrillation" (code I48.19).

When documenting how the afib is currently being managed and treated, it is important to also link the type of medications used for management if present. Additional codes are needed to describe if the patient is taking an anticoagulant [Z79.01 Long-term Current Use of Anticoagulants], Aspirin Z79.82 Long term (current) use of aspirin, or antithrombotic or antiplatelet [Z79.02 Long-term Current Use of Antithrombotic/Antiplatelet Drugs] medications.

Some common medications to look out for in the medical record are:

Anticoagulant Drugs	Antithrombotic/Antiplatlet Drugs

•**Oral-**
  •Vitamin K antagonists- warfarin,
  •DOAC (direct oral anticoagulants)- dabigatran, edoxaban, rivaroxaban, apixaban.
•**Injectable-**
  •Heparin,
  •Low-molecular weight heparin: enoxaparin,
  •Fondaparinux
	•Clopidogrel, Ticagrelor, Prasugrel, Cilostazol, Dipyridamole

A coder cannot assume anticoagulation therapy is being used to treat atrial fibrillation when there is no documented link between the two in the record. If the link between a medication is not made in the documentation, consider querying the provider for clarification. Code also Z95.0 if a Cardiac Pacemaker is present, or Z95.810 if automatic (implantable) cardiac defibrillator is present. If the afib has resolved and is no longer receiving active treatment or being monitored, code for past medical history of atrial fibrillation (Z86.79).

Congestive Heart Failure (CHF) I50.-

To select the appropriate heart failure code, the type of heart failure needs to be known: congestive, hypertensive, postoperative, acute, chronic, acute-on-chronic, diastolic, systolic, etc. If the type of heart failure is not specified, I50.9 for heat failure unspecified is acceptable and risk adjusts but is not recommended if more specificity can be provided. State the cause of heart failure or comorbidities using linking terms to show cause and effect- "associated with," "due to," "secondary to," "hypertensive," etc. Include the current status of heart failure: stable, worsening, improved, in remission, compensated, decompensated, etc. Do not document "history of" to describe current heart failure. In diagnosis coding, the descriptor "history of" implies the condition occurred in the past and no longer exists.

Types

- •**Left sided heart failure-** involves the left ventricle (bottom left chamber of the heart). Blood backs up in the blood vessels that carry blood away from the lungs.
- •**Systolic-** the left ventricle loses its ability to contract normally; thus, it cannot effectively pump blood out of the heart to the body.
- •**Diastolic-** he left ventricle loses its ability to relax normally; thus, it cannot fill with blood during the resting period between beats.
- •**Right sided heart failure-** involves the right ventricle (bottom right chamber of the heart). Blood backs up in the blood vessels that carry blood from the rest of the body back to the heart.
- •**Biventricular heart failure**- a combination of BOTH left-sided and right-sided heart failure. It involves both sides of the heart, and can cause a mix of both types of symptoms.

Acute vs. Chronic

- •**Acute-** active symptoms of heart failure. Can be a new diagnosis.
- •**Chronic-** history of heart failure, but the condition is relatively stable with no symptoms or with manageable symptoms.
- •**Acute on Chronic-** an acute exacerbation of long-term (chronic) heart failure.

Hypertension coding has an assumed causal correlation with chronic kidney disease (CKD) and congestive heart failure (CHF). Per the ICD-10-CM guidelines, underline coders have the discretion to code to higher specificity even when not directly correlated in providers' documentation. This means, if a provider codes I10 for essential hypertension and I50.32 for chronic diastolic (congestive) heart failure on the same date of service, the coder can correct the code selection to reflect I11.0 for hypertensive heart disease with heart failure and include the I50.32 code for the type of heart failure. Always code the CKD code (N18.-) and/or HF code (I50.-) with the hypertension combination code to further specify the type or stage of the comorbidity.

Example: Final diagnosis- Hypertensive heart disease with chronic diastolic CHF and CKD stage 4.

Proper code selection: I13.0 Hypertensive heart and chronic kidney disease with heart failure stage 1-4 CKD, or unspecified CKD, I50.32 Chronic diastolic (congestive) heart failure, N18.4 chronic kidney disease, stage 4 (severe).

Chapter 9: Diseases of the Circulatory System (I00-I99)

a. Hypertension

The classification presumes a causal relationship between hypertension and heart involvement and between hypertension and kidney involvement, as the two conditions are linked by the term "with" in the Alphabetic Index. These conditions should be coded as related even in the absence of provider documentation explicitly linking them, unless the documentation clearly states the conditions are unrelated.

For hypertension and conditions not specifically linked by relational terms such as "with," "associated with" or "due to" in the classification, provider documentation must link the conditions in order to code them as related.

Peripheral Vascular Disease (PVD) I73.-

The codes in this category no longer risk adjusts in the V28 CMS risk adjustment model for the most part, with the exception of Raynaud's syndrome with gangrene (I73.01). This is a heavy hit to clinicians, as a common code used for PVD I73.9 for unspecified PVD no longer will risk adjust. However, if a diabetic patient presents with a comorbidity of peripheral vascular disease, there are combination codes that show PVD as a comorbidity. The HCC this combination code maps to is category 37 for diabetic codes. It will not risk adjust for the vascular disease HCC category like it did in the V24 CMS model when the category was 108.

ICD 10 Code	Code Description	V24 Model	V28 Model
E11.51	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	18	37
E11.51	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	108	
E11.52	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene	18	37
E11.52	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene	106	263
E11.59	Type 2 diabetes mellitus with other circulatory complications	18	37

Deep Vein Thrombosis (DVT) I82.-

Deep vein thromboses can happen anywhere in the body, and therefore must have ample documentation on the type (acute vs. chronic), location, laterality, and complications of the thrombosis to select the correct code. Information on when the DVT first occurred should also be clearly documented in the medical record as it also affects code selection on if the condition would be considered acute or chronic.

Acute vs Chronic	Site/Laterality	Affected Vein	Comorbidities
• Generally, a thrombus is **acute** within <u>first 2 weeks</u> after thrombus forms. • **Subacute** when <u>more than 2 weeks </u>to six months after formation. • **Chronic** once the thrombus is **over six months old**.	• **Upper or lower extremity** • Calf, thigh, etc. • **Laterality** • Left, right, bilateral, unspecified.	• Femoral, Tibial, Axillary, Muscular, Subclavian, Superficial, Vena Cava, Superior Vena cava, Iliac, Popliteal, Proximal lower, Distal lower, Deep, Internal jugular, Other, Unspecified.	• Do not document simply "DVT" when there is also associated thrombophlebitis (I80.-). • <u>Document all comorbidities </u>to the highest level of specificity. • Example: "Acute DVT of the right femoral vein with associated thrombophlebitis."

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), query for clarification and an addendum/correction created when indicated. If the DVT has resolved either through surgery or natural causes, Z86.718 for personal history of venous thrombosis and embolism should be coded in leu of an active DVT diagnosis code. Code also Z79.01 Long-term Current Use of Anticoagulants if the DVT is being managed with. Query the provider when documentation of long-term anticoagulant therapy does not indicate whether this therapy is being used as active treatment of a current DVT vs. historical DVT with for preventing recurrence.

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