Long Term Anti-Coagulants (LTAC)

Provider's guide to diagnose and code LTAC

Approximately 2 million patients between 2007 and 2011 used anti-coagulation agents such as:*

- Vitamin K Antagonist (VKA), such as warfarin
- DTI in the form of dabigatran
- F-10a in the forms of rivaroxaban and apixiban

Medicare patients account for the majority of LTAC use. LTACs offer benefits and consequences such as:

- Reduced clot formation
- Increased risk of bleeding as patient ages

Clinicians:
Use the HAS-BLED risk score to estimate the possibility of bleeding:
www.mdcalc.com/has-bled-score-for-major-bleeding-risk/

Abbreviation Legend:

AF/T	–	Atrial Fibrillation/Flutter	**IVC**	–	Intravenous Catheter
CPE	–	Chronic Pulmonary Embolus	**LTAC**	–	Long Term Anticoagulation
DTI	–	Direct Thrombin Inhibitors	**ND**	–	No Date
DVT	–	Deep Vein Thrombosis	**PE**	–	Pulmonary Embolus
F-10a	–	Factor 10a Inhibitors	**PH**	–	Pulmonary Hypertension
Hx	–	History	**UCSD**	–	University of California San Diego
ICD	–	International Classification of Disease	**VKA**	–	Vitamin K Antagonist
INR	–	International Normalized Ratio			

Most common disease states

Atrial Fibrillation/Flutter (AF/T)

- Cardiac dysrhythmia associated with elevated atrial heart rate
- Increases development of clot secondary to reduced emptying of blood flow from atrial chambers
- Can result in embolic stroke if left untreated
  - Kochanek et.al. (2009) estimates that 800,000 strokes occur annually
- Decision to use prophylactic LTAC is based on patient's risk of developing a clot
  - This can be determined by using the CHADS2 risk score: www.mdcalc.com/chads2-score-for-atrial-fibrillation-stroke-risk/
  - Recent shift toward DTI and F-10a therapy utilization for AF/T embolic stroke prophylaxis
  - **Important:** these drugs do not have a reversal antidote like the VKA drug class

Deep Vein Thrombosis (DVT)

- A clot in a deep vein typically related to stasis of blood flow in the legs
- Can result in a lethal PE if left untreated

Pulmonary Embolus (PE)

- Often lethal result of DVT if left untreated
  - CDC (2014) estimates 60,000 - 100,000 patients die annually
- CPE is the result of residual small blood clot travel within the pulmonary circulation
  - May be precipitated by PH
  - Rare, but if left untreated can exacerbate right heart failure symptoms
  - After the acute treatment has been initialized in the hospital, an oral LTAC is implemented in the form of either a:
    - VKA - Which requires at least monthly blood sampling of the international normalized ratio (INR) to ensure that a therapeutic level of 2.0 to 3.0 is maintained
    - DTI or F-10a - Do not require blood sampling
    - CPE can occur despite a therapeutic INR or initiation of a F-10a
      - Clinician should consider a coagulopathy diagnosis possibility
      - F-10a class is indicated for:
        - AF/T embolic prophylaxis
        - DVT
        - PE
      - DTI class is indicated for:
        - AF/T embolic prophylaxis
        - DVT

Coagulopathies

- Typically a congenital malformation that disrupts the fibrinolytic clotting cascade and results in clot formation
- Clinical risk factors include:
  - Surgery
  - Trauma, including extensive burns
  - Malignancy
  - Immobility
- May be treated with anticoagulants and/or an intravenous (IVC) filter device
- See the ICD coding table on flip side for specific disorders

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Other conditions

Thrombophlebitis

- Can occur after a DVT event , whereby the thrombus degrades the venous valvular structures
- Leads to venous insufficiency and stasis of blood flow that can cause:
  - Clot formation
  - Edema
  - Cutaneous ulcer formation

Mechanical heart valves

- Mechanical valve implants require LTAC prophylaxis
  - The only approved medication class is VKA
  - *The target INR for a mechanical mitral valve is 2.5 to 3.5*
  - *The target INR for an aortic mechanical valve is 2.0 to 3.0*
- Bio prosthetic tissue (porcine or bovine) valve replacements may not require clot LTAC
  - Typically, anti-coagulation duration for four to six weeks following implant

Clinical recommendations

Duration of therapy depends on the chronicity of the embolism. Patients ***without*** a cancer diagnosis should continue therapy as follows (American College of Chest Physicians, 2012– as cited in UCSD [N.D.]):

Indication	Duration of therapy
DVT/PE in the setting of a risk factor (surgery)	3 months
Spontaneous unprovoked DVT/PE	At least 3 months
Second spontaneous unprovoked DVT/PE	At least 3 months with extension of therapy
Non – valvular AF/ defined as rhythm disturbance, in the absence of rheumatic mitral stenosis or a prosthetic heart valve	LTAC is used for prophylaxis and is dependent upon CHADS2 risk factors. If conversion to normal sinus rhythm occurs then discontinuation can be entertained.
Coagulopathies	Lifetime
Mechanical heart valve	Lifetime or until removal/replacement to a bioprosthetic heart valve.

NOTE: Risk for recurrent embolism is highest for the first three months following LTAC cessation

Coding and documentation perspective

It is important to define the thrombus as being acute or chronic. There is no specific timeframe to classify the embolus as being acute or chronic. An acute thrombus is typically treated and diagnosed in the hospital setting, and requires initiation of LTAC. Chronic clots that have already been diagnosed typically require continuation of LTAC. ***As a general guideline patients that are followed in the clinic should be classified as a chronic embolic process. Resolution of the clot and termination of LTAC; or continued LTAC use for clot prophylaxis; should be documented as a past medical historical finding; and should be assigned an appropriate Z-code, such as Z86.711 & Z86.718.*** The coder cannot assume whether the clot is acute or chronic, therefore the clinician is responsible for providing the clot's acuity. ***Failure to address the acuity of the clot results toward an acute diagnosis classification.***

Note: When anticoagulant Coumadin is used for prophylactic prevention following a resolved episode of DVT or PE, the acute/chronic codes cannot be assigned and only warrants the capture of Z codes for the Hx code and anticoagulation.

Coding and documenting

With every clinical encounter, it is important to:

- Verify patient name and date of birth
- Make sure there is a date of service with the clinical encounter
- Include provider name, credentials and signature

In addition to coding LTAC, ***it is important to code and document the primary diagnosis for which LTAC was originally prescribed for.*** The following table serves as a reference point to the clinician for the five most common causes of embolic formation:

ICD-10 Codes	Description	Definition / Tips
Heart Disease		
Z95.2	Presence of prosthetic heart valve	
I05.8	Other rheumatic mitral valve diseases	Rheumatic mitral (valve) failure
I05.9	Rheumatic mitral valve disease, unspecified	Rheumatic mitral (valve) disorder (chronic) NOS
I35. -	Non-rheumatic aortic (valve)	(-) Add 4th character: 0 – stenosis 1 – insufficiency 2 – stenosis w/insufficiency 8 – other disorders 9 – unspecified
I48.0	Paroxysmal atrial fibrillation	
I48.1	Persistent atrial fibrillation	
I48.2	Chronic atrial fibrillation	Permanent atrial fibrillation
I48.3	Typical atrial flutter	Type I atrial flutter
I48.4	Atypical atrial flutter	Type II atrial flutter
I48.9 -	Unspecified atrial fibrillation and atrial flutter	(-) Add 5th character: 1 – atrial fibrillation 2 – atrial flutter
Deep Vein Thrombosis (DVT)		
I82.72.-	Chronic embolism and thrombosis of deep veins of upper extremity	(-) Add 6th character: 1 – right 2 – left 3 – bilateral 9 – unspecified
I82.50 -	Chronic embolism and thrombosis of unspecified deep veins of lower extremity	
I82.51 -	Chronic embolism and thrombosis of femoral vein	
I82.52 -	Chronic embolism and thrombosis of iliac vein	
I82.53 -	Chronic embolism and thrombosis of popliteal vein	
I82.54 -	Chronic embolism and thrombosis of tibial vein	
I82.5Y -	Chronic embolism and thrombosis of unspecified deep veins of proximal lower extremity	
I82.5Z -	Chronic embolism and thrombosis of unspecified deep veins of distal lower extremity	

ICD-10 Codes	Description	Definition / Tips
Thrombophlebitis		
I80.8	Phlebitis of other sites	
I80.1 -	Phlebitis and thrombophlebitis of femoral vein	(-) Add 5th character: 0 – unspecified 1 – right 2 – left 3 – bilateral
I80.20 -	Phlebitis and thrombophlebitis of unspecified deep vessels of lower extremities	(-) Add 6th character: 1 – right 2 – left 3 – bilateral 9 - unspecified
I80.22 -	Phlebitis and thrombophlebitis of popliteal vein	
I80.23 -	Phlebitis and thrombophlebitis of tibial vein	
I80.29 -	Phlebitis and thrombophlebitis of other deep vein vessels of lower extremities	
I87.01 -	Postthrombotic syndrome w/ulcer of lower extremity Use additional code to specify site and severity of ulcer (L97.-)	
Pulmonary Embolism/Pulmonary Hypertension		
I27.2	Other secondary pulmonary hypertension Pulmonary hypertension NOS	Pulmonary hypertension NOS
I27.81	Cor pulmonale (chronic) NOS	
I27.82	Chronic pulmonary embolism	
Coagulapathies		
D68.4	Acquired coagulation factor deficiency	• Due to liver disease • Due to vitamin K deficiency
D68.51	Activated protein C resistance	Factor V Leiden mutation
D68.52	Prothrombin gene mutation	
D68.59	Other primary thrombophilia	• Antithrombin III deficiency • Hypercoagulable state NOS • Primary hypercoagulable state NEC • Primary thrombophilia NEC • Primary thrombophilia NEC • Protein C deficiency • Protein S deficiency • Thrombophilia NOS
D68.61	Antiphospholipid syndrome	• Anticardiolipin syndrome • Antiphospholipid antibody syndrome
D68.62	Lupus anticoagulant syndrome	• Lupus anticoagulant • Presence of systemic lupus erythematosus (SLE) inhibitor

ICD-10 Codes	Description	Definition / Tips
Z Codes		
Z79.01	Long-term (current) use of anticoagulants	
Z86.718	Personal history of other venous thrombosis or embolism	
Z86.7111	Personal history of pulmonary embolism	
Z95.828	Presence of artificial or mechanical or prosthesis of artery	

*Kirley et al., 2012

References:

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