

Documenting atrial fibrillation and secondary hypercoagulable state

Fast Facts:

- Atrial fibrillation is the most common serious abnormal heart rhythm affecting approximately 3.03 million patients in the United States.¹
- It doubles the risk of mortality and increases the risk of stroke fivefold.^{2,3}
- The pathophysiology of thromboembolism in atrial fibrillation is multi-factorial but increasing evidence points to the fulfillment of Virchow's triad in this arrhythmia, leading to a prothrombotic or hypercoagulable state in atrial fibrillation.⁴

Background:

Other than a very small percentage of patients with atrial fibrillation without any known risk factors, or a CHA₂DS₂-VASc score of zero, all patients with atrial fibrillation have a secondary prothrombotic or hypercoagulable state, primarily due to the presence of atrial fibrillation. This state is secondary to the presence of atrial fibrillation itself, although some patients may have additional genetic predisposition to hypercoagulability.

Patients with elevated CHA₂DS₂-VASc scores are at progressively higher risk of thromboembolic events based on additional characteristics, such as the presence of diabetes or heart failure.

The management approach is the same for all patients with atrial fibrillation, and included in the CHA₂DS₂-VASc score which accounts for all these associated conditions and generates a statistical risk for thromboembolism. Patients with all but the lowest CHA₂DS₂-VASc score are treated with anticoagulation, and therefore, there are no other

parameters of coagulation which would make a change in the management.

There is no specific need for testing coagulation in the setting of atrial fibrillation specifically. It does not impact how we care for patients with atrial fibrillation as we use the risk scoring parameters to determine management.

CHA ₂ DS ₂ -VASc Risk Factors	Score
Congestive heart failure/LV dysfunction	1
Hypertension	1
Age > 75 years*	2
Diabetes mellitus	1
Stroke/TIA/TE	2
Vascular disease/MI/Aortic plaque	1
Age 65-75 years*	1
Sex category (Female=1, Male=0)	1
Maximum Score*	9
Risk	Score
Low	0
Moderate	1
High	>2
*Maximum score is 9, as age is only counted once.	

Documentation Tips:

Question: From a coding perspective, can I code both atrial fibrillation and secondary hypercoagulable state?

Yes, because only those with a higher risk (higher CHA₂DS₂-VASc score) are considered to have secondary hypercoagulable state, it should be coded to show severity. The provider however must document both conditions in the note. It cannot be assumed by a coder that secondary hypercoagulable state exists in patients with AFIB and a higher CHA₂DS₂-VASc score.

Question: Is ICD-10 D68.69 (Other thrombophilia) the same thing as secondary hypercoagulable state?

Yes, ICD 10 code D68.69 (Other thrombophilia) groups multiple ICD 9 code descriptors within this category including secondary hypercoagulable state (previously 289.82).

Question: What is the difference between coding a primary vs. secondary hypercoagulable state?

AHA coding clinics provides the following definition of primary vs secondary hypercoagulable state:

Additional References from American Medical Research:

- Lip GY. Does atrial fibrillation confer a hypercoagulable state? *Lancet*. 1995; 346(8986):1313.
 - Friberg L, Rosenqvist M, Lip GY. Net clinical benefit of warfarin in patients with atrial fibrillation: a report from the Swedish atrial fibrillation cohort study. *Circulation*. 2012 May;125(19):2298-307.
 - Camm AJ, Lip GY, De Caterina R, Savelieva I, Atar D, Hohnloser SH, et al. 2012 focused update of the ESC Guidelines for the management of atrial fibrillation: an update of the 2010 ESC Guidelines for the management of atrial fibrillation--developed with the special contribution of the European Heart Rhythm Association. *ESC Committee for Practice Guidelines-CPG, Document Reviewers Europace*. 2012 Oct;14(10):1385-413.
1. Naccarelli GV, V. H. (2009). Increasing prevalence of atrial fibrillation and flutter in the United States. *Am J Cardiol*, 104(11):1534.
 2. Benjamin EJ, W. P. (1998). Impact of Atrial Fibrillation on the Risk of Death :The Framingham Heart Study. *Circulation.*, 98: 946-952 .
 3. Kannel WB, W. P. (1998). Prevalence, incidence, prognosis, and predisposing conditions for atrial fibrillation: population-based estimates. *Am J Cardiol*, 82(8A):2N-9N.
 4. Choudhury, A., & Lip, G. (2004; 33). Atrial Fibrillation and the Hypercoagulable State: From Basic Science to Clinical Practice. *Pathophysiology of Haemostasis and Thrombosis*, 282-289.

- **Primary hypercoagulable states** are inherited disorders of specific anticoagulant factors. Rare examples are antithrombin III deficiency, protein S deficiency, and protein C deficiency. More common inherited conditions are Factor V Leiden mutation, prothrombin gene mutation, antithrombin III deficiency, protein S deficiency, and protein C deficiency.
- **Secondary hypercoagulable states** are acquired disorders that predispose patients to thrombosis. These involve blood flow abnormalities or defects in blood composition and of vessel walls. Examples of conditions that can cause secondary hypercoagulable states are atrial fibrillation, malignancy, pregnancy, trauma, myeloproliferative disorders, and antiphospholipid antibody syndrome.

When coding secondary hypercoagulable state be sure to code the causal condition. See examples below.

ICD-10 CODES

- I48.0 Paroxysmal atrial fibrillation
- I48.1 Persistent atrial fibrillation
- I48.2 Chronic atrial fibrillation
- I48.91 Unspecified atrial fibrillation
- D68.69 Other thrombophilia includes:
 - Hypercoagulable states NEC
 - Secondary hypercoagulable state NOS