Practice Guidelines

Management of Atrial Fibrillation: Updated Guidance from the AHA, ACC, and HRS

Key Points for Practice

- Anticoagulation is recommended for AF at a CHA_2DS_2-VASc score of 2 for men and 3 for women without moderate or severe mitral stenosis or a mechanical valve. The score has not been validated for mitral stenosis or mechanical valves.
- Direct oral anticoagulants are recommended over warfarin for AF without moderate or severe mitral stenosis or a mechanical valve. Warfarin is still recommended for mitral stenosis and mechanical valves.
- Although CHA_2DS_2-VASc scores of 0 for men and 1 for women do not require treatment, scores of 1 for men and 2 for women are indeterminate and anticoagulation may be considered by shared decision-making.

From the *AFP* Editors

This guideline on atrial fibrillation (AF) management from the American Heart Association (AHA), American College of Cardiology (ACC), and Heart Rhythm Society (HRS) is an update of the 2014 version and is based on new evidence from clinical trials and the U.S. Food and Drug Administration (FDA). Treatment recommendations apply to paroxysmal, persistent, and permanent AF as well as atrial flutter. In this update, the sections on anticoagulation, catheter ablation, and management of AF complicating acute coronary syndrome were modified, and new sections were added outlining weight loss and device detection of AF; however, this summary focuses on the new and revised recommendations for choosing an anticoagulant and new recommendations for preventing stroke via nonpharmacologic options and use of catheter ablation.

Coverage of guidelines from other organizations does not imply endorsement by *AFP* or the AAFP.

This series is coordinated by Sumi Sexton, MD, editor-in-chief.

A collection of Practice Guidelines published in *AFP* is available at https://www.aafp.org/afp/practguide.

CME **This clinical content** conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 79.

Author disclosure: No relevant financial affiliations.

Key Recommendations

HIGH-QUALITY EVIDENCE

Based on high-quality evidence, oral anticoagulants should be prescribed for women with AF and a CHA_2DS_2-VASc (congestive heart failure; hypertension; age of at least 75 years [doubled]; diabetes mellitus; previous stroke, transient ischemic attack, or thromboembolism [doubled]; vascular disease; age 65 to 74 years; sex category) score of at least 3 and for men with AF with a score of at least 2. Direct oral anticoagulants, including dabigatran (Pradaxa), rivaroxaban (Xarelto), apixaban (Eliquis), and edoxaban (Savaysa), are preferred to warfarin (Coumadin) unless the patient has concomitant moderate or severe mitral stenosis or a mechanical heart valve. Based on new data, the recommended setpoints for anticoagulation have been increased, and the previous recommendation to prescribe an anticoagulant for all patients with AF who have a history of stroke or transient ischemic attack has been removed.

For patients taking warfarin, an international normalized ratio test is recommended at least every week at the start of treatment and monthly when stable within the recommended range.

MODERATE-QUALITY EVIDENCE

A CHA_2DS_2-VASc score should be used to evaluate stroke risk in patients with AF who do not have moderate or severe mitral stenosis or a mechanical heart valve. The CHA_2DS_2-VASc score has not been validated in patients with mitral stenosis or mechanical heart valves. Limited research supports using the CHA_2DS_2-VASc score to determine risk in patients with bioprosthetic valves. Warfarin is the recommended

anticoagulant for patients with AF and moderate or severe mitral stenosis or a mechanical heart valve. Dabigatran should be avoided in patients with AF and a mechanical heart valve.

Renal and hepatic function should be assessed before initiating direct oral anticoagulant therapy, then at least each year thereafter.

Anticoagulant therapy is not necessary for men with AF and a CHA_2DS_2-VASc score of 0 or for women with AF and a score of 1, except in the presence of moderate or severe mitral stenosis or a mechanical heart valve.

Warfarin or apixaban can be considered in men with AF, end-stage renal disease (ESRD) or on dialysis, and a CHA_2DS_2-VASc score of at least 2 and in women with AF, ESRD or on dialysis, and a CHA_2DS_2-VASc score of at least 3. Treatment with lower dosages of a direct thrombin or factor Xa inhibitor is an option for patients with AF, moderate or severe chronic kidney disease, and an increased CHA_2DS_2-VASc score.

Based on new evidence and FDA approval of a new appendage closure system, percutaneous left atrial appendage occlusion is an option for patients with AF and a higher risk of stroke who are unable to take anticoagulants for a long duration because of bleeding risk or poor tolerance. Patients treated via this method have fewer hemorrhagic strokes than those treated with warfarin, but with a nonsignificant trend towards more ischemic strokes.

For patients with symptomatic AF and heart failure who have decreased left ventricular function, catheter ablation can decrease mortality and hospitalizations linked to heart failure. Evidence indicates that catheter ablation reduces mortality and hospitalizations for heart failure and improves ejection fraction compared with guideline-directed medical therapy alone. Ablation controls sinus rhythm better than amiodarone.

LIMITED EVIDENCE OR EXPERT OPINION

For men with a CHA_2DS_2-VASc score of 1 and for women with a score of 2, the choice of anticoagulant for AF should be based on discussion with patients about the stroke and bleeding risks of each option. The need for an anticoagulant and the type of anticoagulant prescribed should be reviewed periodically to evaluate the patient's risks of stroke and bleeding.

Based on expert opinion, patients with AF without moderate or severe mitral stenosis or a mechanical heart valve who are taking warfarin, but whose international normalized ratio is not being maintained in a therapeutic range, should have their treatment regimen changed to a direct oral anticogulant. Because there are no data indicating that the benefits are greater than the harms, dabigatran, rivaroxaban, and edoxaban should be avoided in patients with AF and ESRD or on dialysis.

Editor's Note: In addition to this update, the American College of Chest Physicians (ACCP) recently updated its recommendations on anticoagulation for AF. These ACCP guidelines recommend the same CHA_2DS_2-VASc scores of 2 for men and 3 for women for anticoagulation as the ACC/AHA/HRS. The ACCP recommends using the HAS-BLED (hypertension, abnormal renal and liver function, stroke, bleeding, labile international normalized ratio, elderly [older than 65 years], drugs and alcohol) bleeding score as a means of formalizing the estimate of bleeding risk, whereas the ACC/AHA/HRS continue to question the clinical utility of the HAS-BLED score and recommend a value-based comparison of risks of stroke and bleeding.

In 2017, the American Academy of Family Physicians published guidelines on AF with the American College of Physicians. These guidelines recommend using the HAS-BLED score to quantify bleeding risk like the ACCP recommendations, but recommend anticoagulant consideration for all patients with CHA_2DS_2-VASc scores of 2 or higher (https://www.aafp.org/patient-care/clinical-recommendations/all/atrial-fibrillation.html).—Michael Arnold, MD, Editorial Fellow

Guideline source: American College of Cardiology, American Heart Association, Heart Rhythm Society

Evidence rating system used? Yes

Systematic literature search described? Yes

Guideline developed by participants without relevant financial ties to industry? No

Recommendations based on patient-oriented outcomes? Yes

Published source: *Heart Rhythm.* August 2019;16(8): e66-e93

Available at: https://www.heartrhythmjournal.com/article/S1547-5271(19)30037-2/fulltext

Lisa Croke
AFP Senior Associate Editor ■