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Afib 2014 guidelines. Atrial fibrillation 2014 guidelines.

Management of patients with atrial fibrillation (compilation of 2006 ACCP/AHA/ESC and 2011 ACCP/AHA/HRS recommendations): a report of the American College of Cardiology/American Heart Association Task Force on practice guidelines. American College of Cardiology Foundation; American Heart Association; European Society of Cardiology; Heart Rhythm Society, Wann LS, Curtis AB, Ellenbogen KA, Estes NA, Ezekowitz MD, Jackman WM, January CT, Lowe JE, Page RL, Slotwiner DJ, Stevenson WG, Tracy CM, Fuster V, Rydén LE, Cannon DS, Crisjns HJ, Curtis AB, Ellenbogen KA, Halperin JL, Le Heuzey J, Kay GN, Lowe JE, Olsson SB, Prystowsky EN, Tamargo JL, Wann LS. American College of Cardiology Foundation, et al. *Circulation*. 2013 May 7;127(18):1916-26. doi: 10.1161/CIR.0b013e318290826d. Epub 2013 Apr 1. *Circulation*. 2013. PMID: 23545139 No abstract available. This guideline of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the Heart Rhythm Society, developed in collaboration with the Society of Thoracic Surgeons, establishes revised guidance for optimum management of atrial fibrillation (AF). This guideline supersedes the 2006 ACCP/AHA/ESC Guideline for the Management of Patients with Atrial Fibrillation and the two subsequent focused updates from 2011. The new guideline incorporates new and existing knowledge derived from published clinical trials, basic science, and comprehensive review articles, along with evolving treatment strategies and new drugs. In addition, the ACC/AHA, American College of Physicians, and American Academy of Family Physicians submitted a proposal to the Agency for Healthcare Research and Quality to perform a systematic review on specific questions related to the treatment of AF. The data from that report were reviewed by the writing committee and incorporated where appropriate. The 2014 AF guideline is organized thematically with recommendations, where appropriate, provided with each section. Some recommendations from earlier guidelines have been eliminated or updated, as warranted by new evidence or a better understanding of earlier evidence. See also 2019 AHA/ACC/HRS Focused Update of the 2014 AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation. Glenn N. Levine, MD, FACC, FAHA, Chair/Patrick T. O'Gara, MD, MACC, FAHA, Chair-Elect/Jonathan L. Halperin, MD, FACC, FAHA, Immediate Past Chair #Former Task Force member; current member during the writing effort.Sana M. Al-Khatib, MD, MHS, FACC, FAHA/Joshua A. Beckman, MD, MS, FAHA/Kim K. Birtcher, PhD, MS, AACCP/Bykrom Bozkurt, MD, PhD, FACC, FAHA #Former Task Force member; current member during the writing effort.Ralph G. 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Wijeyesundera, MD, PhDSince 1980, the American College of Cardiology (ACC) and American Heart Association (AHA) have translated scientific evidence into clinical practice guidelines with recommendations to improve cardiovascular health. These guidelines, which are based on systematic methods to evaluate and classify evidence, provide a foundation for the delivery of quality cardiovascular care. The ACC and AHA sponsor the development and publication of clinical practice guidelines without commercial support, and members volunteer their time to the writing and review efforts. Guidelines are official policy of the ACC and AHA. For some guidelines, the ACC and AHA partner with other organizations. This guideline is a collaboration of the ACC and AHA with the Heart Rhythm Society (HRS) as a partner, and the Society of Thoracic Surgeons as a collaborator. Clinical practice guidelines provide recommendations applicable to patients with or at risk of developing cardiovascular disease. The focus is on medical practice in the United States, but these guidelines are relevant to patients throughout the world. Although guidelines may be used to inform regulatory or payer decisions, the intent is to improve quality of care and align with patients' interests. Guidelines are intended to define practices meeting the needs of patients in most, but not all, circumstances, and should not replace clinical judgment.Management, in accordance with guideline recommendations, is effective only when followed by both practitioners and patients. Adherence to recommendations can be enhanced by shared decision-making between clinicians and patients, with patient engagement in selecting interventions on the basis of individual values, preferences, and associated conditions and comorbidities.The ACC/AHA Task Force on Clinical Practice Guidelines (Task Force) continuously reviews, updates, and modifies guideline methodology on the basis of published standards from organizations, including the Institute of Medicine (P-1/Committee on Standards for Developing Trustworthy Clinical Practice Guidelines, Institute of Medicine (U.S.)/Clinical Practice Guidelines We Can Trust., P-2/Committee on Standards for Systematic Reviews of Comparative Effectiveness Research, Institute of Medicine (U.S.)/Finding What Works in Health Care: Standards for Systematic Reviews.), and on the basis of internal reevaluation. Similarly, presentation and delivery of guidelines are reevaluated and modified in response to evolving technologies and other factors to optimally facilitate dissemination of information to healthcare professionals at the point of care.Beginning in 2017, numerous modifications to the guidelines have been and continue to be implemented to make guidelines shorter and enhance "user friendliness." Guidelines are written and presented in a modular knowledge chunk format, in which each chunk includes a table of recommendations, a brief synopsis, recommendation-specific supportive text and, when appropriate, flow diagrams or additional tables. Hyperlinked references are provided for each modular knowledge chunk to facilitate quick access and review. More structured guidelines—including word limits ("targets") and a web guideline supplement for useful but noncritical tables and figures—are 2 such changes. Also, to promote conciseness, the Preamble is presented in abbreviated form in the executive summary and full-text guideline documents. In recognition of the importance of cost-value considerations in certain guidelines, when appropriate and feasible, an analysis of value for a drug, device, or intervention may be performed in accordance with the ACC/AHA methodology (P-3/Anderson J.L. Heidenreich P.A. Barnett P.G. et al.ACC/AHA statement on cost/value methodology in clinical practice guidelines and performance measures: a report of the American College of Cardiology/American Heart Association Task Force on Performance Measures and Task Force on Practice Guidelines.Crossref PubMed Scopus (195) Google Scholar).To ensure that guideline recommendations remain current, new data are reviewed on an ongoing basis, with full guideline revisions commissioned ideally in approximate 6-year cycles. Publication of potentially practice-changing new study results relevant to an existing or new drug, device, or management strategy prompts evaluation by the Task Force, in consultation with the relevant guideline writing committee, to determine whether a focused update should be commissioned. For additional information and policies on guideline development, we encourage readers to consult the ACC/AHA guideline methodology manual (1) and other methodology articles (P-5/Halperin J.L. Levine G.N. Al-Khatib S.M. et al.Further evolution of the ACC/AHA clinical practice guideline recommendation classification system: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines.Crossref PubMed Google Scholar. P-6/Jacobs A.K. Anderson J.L. Halperin J.L. The evolution and future of ACC/AHA clinical practice guidelines: a 30-year journey: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines.Crossref PubMed Scopus (83) Google Scholar. P-7/Jacobs A.K. Kushner F.G. Ettlinger S.M. et al.ACC/AHA clinical practice guideline methodology summit report: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines.Crossref PubMed Scopus (0) Google Scholar. P-8/Arnett D.K. Goodman R.A. Halperin J.L. et al.AHA/ACC/HRS strategies to enhance application of clinical practice guidelines in patients with cardiovascular disease and comorbid conditions: from the American Heart Association, American College of Cardiology, and US Department of Health and Human Services.Crossref PubMed Scopus (73) Google Scholar).The Task Force strives to ensure that the guideline writing committee both contains requisite expertise and is representative of the broader medical community by selecting experts from a broad array of backgrounds, representing different geographic regions, sexes, races, ethnicities, intellectual perspectives/biases, and scopes of clinical practice, and by inviting organizations and professional societies with related interests and expertise to participate as partners or collaborators.The ACC and AHA have rigorous policies and methods to ensure that documents are developed without bias or improper influence. The complete policy on relationships with industry and other entities (RWI) can be found online. Appendix 1 of the guideline lists writing committee members' relevant RWI; for the purposes of full transparency, their comprehensive disclosure information is available online. Comprehensive disclosure information for the Task Force is also available online.In developing recommendations, the writing committee uses evidence-based methodologies that are based on all available data (, P-5/Halperin J.L. Levine G.N. Al-Khatib S.M. et al.Further evolution of the ACC/AHA clinical practice guideline recommendation classification system: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines.Crossref PubMed Google Scholar. P-6/Jacobs A.K. Anderson J.L. Halperin J.L. The evolution and future of ACC/AHA clinical practice guidelines: a 30-year journey: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines.Crossref PubMed Scopus (83) Google Scholar). Literature searches focus on randomized controlled trials (RCTs) but also include registries, nonrandomized comparative and descriptive studies, case series, cohort studies, systematic reviews, and expert opinion. Only key references are cited.An independent evidence review committee is commissioned when there are one or more questions deemed of utmost clinical importance that merit formal systematic review to determine which patients are most likely to benefit from a drug, device, or treatment strategy, and to what degree. Criteria for commissioning an evidence review committee and formal systematic review include absence of a current authoritative systematic review, feasibility of defining the benefit and risk in a timeframe consistent with the writing of a guideline, relevance to a substantial number of patients, and likelihood that the findings can be translated into actionable recommendations. Evidence review committee members may include methodologists, epidemiologists, clinicians, and biostatisticians. Recommendations developed by the writing committee on the basis of the systematic review are marked "SR."The term guideline-directed management and therapy encompasses clinical evaluation, diagnostic testing, and both pharmacological and procedural treatments. For these and all recommended drug treatment regimens, the reader should confirm dosage with product insert material and evaluate for contraindications and interactions. Recommendations are limited to drugs, devices, and treatments approved for clinical use in the United States.The Class of Recommendation (COR) indicates the strength of recommendation, encompassing the estimated magnitude and certainty of benefit in proportion to risk. The Level of Evidence (LOE) rates the quality of scientific evidence supporting the intervention on the basis of the type, quantity, and consistency of data from clinical trials and other sources (Table 1) (P-5/Halperin J.L. Levine G.N. Al-Khatib S.M. et al.Further evolution of the ACC/AHA clinical practice guideline recommendation classification system: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines.Crossref PubMed Google Scholar).Table 1Applying Class of Recommendation and Level of Evidence to Clinical Strategies, Interventions, Treatments, or Diagnostic Testing in Patient Care* (Updated August 2015)Glenn N. Levine, MD, FACC, FAHA/Chair, ACC/AHA Task Force on Clinical Practice GuidelinesThe purpose of this document is to update the "2014 AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation" (S1.3-3/January C.T. Wann L.S. Alpert J.S. et al.2014 AHA/ACC/HRS guideline for the management of patients with atrial fibrillation: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the Heart Rhythm Society.Crossref PubMed Scopus (2054) Google Scholar) (2014 AF Guideline) in areas for which new evidence has emerged since its publication. The scope of this focused update of the 2014 AF Guideline includes revisions to the section on anticoagulation (because of the approval of new medications and thromboembolism protection devices), revisions to the section on catheter ablation of atrial fibrillation (AF), revisions to the section on the management of AF complicating acute coronary syndrome (ACS), and new sections on device detection of AF and weight loss. The areas of the 2014 AF Guideline that were updated were limited to those for which important new data from clinical trials had emerged and/or new U.S. Food and Drug Administration (FDA) indications for thromboembolism protection devices have appeared in the data available to the writing group up to August 2018.All recommendations (new, modified, and unchanged) for each updated clinical section are included to provide a comprehensive assessment. The text explains new and modified recommendations, whereas recommendations from the previous guideline that have been deleted or superseded no longer appear. Please consult the full-text version of the 2014 AF Guideline (S1.3-3/January C.T. Wann L.S. Alpert J.S. et al.2014 AHA/ACC/HRS guideline for the management of patients with atrial fibrillation: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the Heart Rhythm Society.Crossref PubMed Scopus (2054) Google Scholar) for text and evidence tables supporting the unchanged recommendations and for clinical areas not addressed in this focused update. Individual recommendations in this focused update will be incorporated into the full-text guideline in the future. Recommendations from the prior guideline that remain current have been included for completeness, but the LOE reflects the COR/LOE system used when initially developed. New and modified recommendations in this focused update reflect the latest COR/LOE system, in which LOE B and C are subcategorized for greater specificity (, S1.3-3/Halperin J.L. Levine G.N. Al-Khatib S.M. et al.Further evolution of the ACC/AHA clinical practice guideline recommendation classification system: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines.Crossref PubMed Scopus (0) Google Scholar). The section numbers correspond to the full-text guideline sections.Clinical trials presented at the annual scientific meetings of the ACC, AHA, Heart Rhythm Society (HRS), and European Society of Cardiology, as well as other selected data published in a peer-reviewed format through August 2018, were reviewed by the Task Force and members of the 2014 AF Guideline writing group to identify trials and other key data that might affect guideline recommendations. The information considered important enough to prompt updated recommendations is included in evidence tables in the Online Data Supplement. The complete section of recommendations (new, modified, and unchanged) for each clinical section is included to provide a comprehensive overview for the reader. Recommendations that have been deleted or superseded are not incorporated. The text supporting the new and modified recommendations is provided.After the preliminary recommendation and text were drafted for percutaneous approaches to occlusion of the atrial atrial appendage (LAA), it was appreciated that the primary author of the section had, by strict criteria, an RWI relevant to the section. Task Force and organizational leadership directed that both the recommendation and text be discarded and the section be constructed de novo by two a new primary author and new primary reviewer, both without RWI. This new section was thoroughly reviewed by the entire writing group, and the de novo formulated recommendation, as well as all recommendations in the focused update, was formally voted on by the writing group.For this focused update, representative members of the 2014 AF writing committee were invited to participate, and they were joined by additional invited members to form a new writing group, referred to as the 2018 AF Guideline Focused Update Writing Group. Members were required to disclose all RWI relevant to the data under consideration. The group was composed of clinicians with broad expertise related to AF and its treatment, including the areas of adult cardiology, electrophysiology, cardiothoracic surgery, and heart failure (HF). The writing group included representatives from the ACC, AHA, HRS, and the Society of Thoracic Surgeons.The focused update was reviewed by 2 official reviewers each nominated by the ACC, AHA, and HRS: 1 AHA/ACC lay reviewer; 1 organizational reviewer from the Society of Thoracic Surgeons; and 29 individual content reviewers. Reviewers' abbreviated RWI information is published in this document (Appendix 2), and their detailed disclosures are available online.This document was approved for publication by the governing bodies of the ACC, AHA, and HRS and was endorsed by the Society of Thoracic Surgeons.Tablled Introductory TextThe distinction between nonvalvular and valvular AF has confused clinicians, varying among AF clinical trials of non-vitamin K oral anticoagulants (NOACs) (i.e., dabigatran [a direct thrombin inhibitor] and rivaroxaban, apixaban, and edoxaban [Factor Xa inhibitors]); also referred to as direct-acting oral anticoagulants (DOACs) and between North American and European AF guidelines. Valvular AF generally refers to AF in the setting of moderate-to-severe mitral stenosis (potentially requiring surgical intervention) or in the presence of an artificial (mechanical) heart valve. Valvular AF is considered an indication for long-term anticoagulation with warfarin. In contrast, nonvalvular AF does not imply the absence of valvular heart disease. Instead, as used in the present focused update, nonvalvular AF is AF in the absence of moderate-to-severe mitral stenosis or a mechanical heart valve. This is because in most AF NOAC clinical trials, up to approximately 20% of patients were enrolled with various valvular defects, including mild mitral stenosis, mild regurgitation, aortic stenosis, aortic regurgitation, and tricuspid regurgitation (, S4.1.1-2/Ezekowitz M.D. Nagarkanti R. Noack H. et al.Comparison of dabigatran with atrial fibrillation and valvular heart disease: the RE-LY Trial (Randomized Evaluation of Long-Term Anticoagulant Therapy).Crossref PubMed Scopus (67) Google Scholar); some trials enrolled small numbers of patients with valve repair, valvuloplasty, and bioprosthetic valves. Furthermore, meta-analysis-derived data from the original clinical trials suggest that, among patients with AF and these valvular lesions and operations, NOACs reduce stroke and systemic embolism compared with warfarin, but with differences in bleeding risk (S1.1-1-3/Par K.-L. Singer D.E. Oviabiele B. et al.Effects of non-vitamin K antagonist oral anticoagulants versus warfarin in patients with atrial fibrillation and valvular heart disease: a systematic review and meta-analysis.Crossref PubMed Scopus (17) Google Scholar). For recommendations from the 2014 AF guideline that were modified only to define the exclusion criteria for valvular AF or to change "antithrombotic" to "anticoagulant," LOE and supportive text have not been updated. A fifth NOAC, betrixaban, has not been approved by the FDA for use in patients with AF. Antithrombotic (anticoagulant combined with antiplatelet) therapy is discussed in Sections 4.4.1. and 7.4. (, Recommendation-Specific Supportive Text (New or Modified)Most NOACs represent an advance in therapeutic safety when compared with warfarin for prevention of thromboembolism in patients with AF. The NOAC AF trials demonstrated that NOACs are noninferior () or superior () to warfarin in preventing stroke or thromboembolism. NOACs reduce intracranial bleeding as compared with warfarin (, , , S4.2.2-2-5/Par K.-L. Singer D.E. Oviabiele B. et al.Effects of non-vitamin K antagonist oral anticoagulants versus warfarin in patients with atrial fibrillation and valvular heart disease: a systematic review and meta-analysis.Crossref PubMed Scopus (17) Google Scholar). Although no direct RCT data are available, limited data comparing individual NOACs to one another are emerging from meta-analyses of the original NOAC clinical trials () and registries and patient databases (, , S4.2.2-2-9/Larsen T.B. Skjøth F. Nielsen P.B. et al.Comparative effectiveness and safety of non-vitamin K antagonist oral anticoagulants and warfarin in patients with atrial fibrillation: propensity weighted nationwide cohort study.Crossref PubMed Scopus (54) 2.2-10/Lip G.Y.H. Keshishian A. Kambale S. et al.Real-world comparison of major bleeding risk among non-valvular atrial fibrillation patients initiated on apixaban, dabigatran, rivaroxaban, or warfarin. A propensity score matched analysis.Crossref PubMed Scopus (146) Google Scholar. , , S4.2.2-13/Ntaïos G. Pappasileiou V. Makratis K. et al.Real-world setting comparison of nonvitamin-K antagonist oral anticoagulants versus vitamin-K antagonists for stroke prevention in atrial fibrillation: a systematic review and meta-analysis.Crossref PubMed Scopus (71) Google Scholar.), and meta-data are expected. Specific NOACs, such as apixaban, may have lower risks of bleeding (including intracranial hemorrhage) and improved efficacy for stroke prevention, whereas the risk of bleeding for rivaroxaban is comparable to that of warfarin. In other studies, uninterrupted dabigatran had a more favorable outcome than warfarin in ablation of AF (RE-CIRCUIT Trial [Uninterrupted Dabigatran Etexilate in Comparison to Uninterrupted Warfarin in Pulmonary Vein Ablation]). Over time, NOACs (particularly dabigatran and rivaroxaban) may be associated with lower risks of adverse renal outcomes than warfarin in patients with AF (). Among older adults with AF receiving anticoagulation, dabigatran was associated with a lower risk of osteoporotic fracture than warfarin (). Data on drug interactions with NOACs are emerging (). Interpretation of these data requires careful consideration of trial design, including factors such as absence of control groups, incomplete laboratory and historical data, missing data for some drugs (particularly edoxaban), and varying NOAC drug doses (some approved doses in the United States differ from those in Europe). Head-to-head prospective RCT data for NOACs are needed for further evaluation of comparative bleeding risk and effectiveness.Commercial assays to measure NOAC serum levels are now available, but reference ranges derived from published literature are variable and are not well correlated with safety, efficacy, and clinical outcomes. Indications for measurement of NOAC serum levels might include:Tablled 1Recommendations for Interruption and Bridging AnticoagulationRecommendation-Specific Supportive Text (New or Modified)Tablled 1Recommendation for Percutaneous Approaches to Occlude the LAARecommendation-Specific Supportive Text (New or Modified)Tablled 1Recommendations for Prevention of ThromboembolismRecommendation-Specific Supportive Text (New or Modified)Recommendation-Specific Supportive Text (New or Modified)Tablled 1Recommendations for Device Detection of AF and Atrial FlutterRecommendation-Specific Supportive Text (New or Modified)Recommendation-Specific Supportive Text (New)American College of Cardiology.C. Michael Valentine, MD, FACC, President/Timothy W. Attebery, DSc, MBA, FACHE, Chief Executive Officer/William J. Oetgen, MD, MBA, FACC, FACP, Executive Vice President, Science, Education, Quality, and Publishing/MaryAnne Elma, MPH, Senior Director, Science, Education, Quality, and Publishing/Amelia Scholtz, PhD, Publications Manager, Science, Education, Quality, and Publishing/American College of Cardiology/American Heart Association/Katherine A. Sheehan, PhD, Director, Guideline Strategy and Operations/Abdul R. Abdullah, MD, Senior Manager, Guideline Science/Thomas S. D. Getchys, Manager, Guideline Science/Zainab Shipchandler, MPH, Associate Guideline Advisor/American Heart Association/Ivor J. Benjamin, MD, President/Nancy Brown, Chief Executive Officer/Rose Marie Robertson, MD, FAHA, Chief Science and Medicine Officer/Gayle R. Whitman, PhD, RN, FAAN, FAAN, Senior Vice President, Office of Science Operations/Anne Leonard, MPH, RN, CGCR, FAHA, Senior Science and Medicine Advisor, Office of Science Operations/Jody Hundley, Production and Operations Manager, Scientific Publications, Office of Science Operations/Appendix 1This table represents the relationships of committee members with industry and other entities that were determined to be relevant to this document. These relationships were reviewed and updated in conjunction with all meetings and/or conference calls of the writing committee during the document development process. The table does not necessarily reflect relationships with industry at the time of publication. A person is deemed to have a significant interest in a business if the interest represents ownership of ≥5% of the voting stock or share of the business entity, or ownership of ≥\$5,000 of the fair market value of the business entity, or if funds received by the person from the business entity exceeded 5% of the person's gross income for the previous year. Relationships that exist with no financial benefit are also included for the purpose of transparency. Relationships in this table are modest unless otherwise noted.According to the ACC/AHA, a person has a relevant relationship if: a) the relationship or interest relates to the same or similar subject matter, intellectual property or asset, topic, or issue addressed in the document; or b) the company/entity (with whom the relationship exists) makes a drug, drug class, or device addressed in the document, or makes a competing drug or device addressed in the document; or c) the person or a member of the person's household, has a reasonable potential for financial, professional or other personal gain or loss as a result of the issues/content addressed in the document.The Atrial Fibrillation Guideline was initiated in September 2016. Over the initial years of the CMS Open Payment System, understandably, there have been many issues related to the accurate reporting of food and beverage payments. For this reason, the ACC and AHA have not considered these minor charges relevant relationships with industry.ACC = American College of Cardiology; AHA = American Heart Association; CMS = Centers for Medicare & Medicaid Services; HRS = Heart Rhythm Society; PI = principal investigator; VA = Veterans Affairs.Appendix 2This table represents all relationships of reviewers with industry and other entities that were reported at the time of peer review, including those not deemed to be relevant to this document, at the time this document was under review. The table does not necessarily reflect relationships with industry at the time of publication. A person is deemed to have a significant interest in a business if the interest represents ownership of ≥5% of the voting stock or share of the business entity, or ownership of ≥\$5,000 of the fair market value of the business entity, or if funds received by the person from the business entity exceeded 5% of the person's gross income for the previous year. Relationships that exist with no financial benefit are also included for the purpose of transparency. Relationships in this table are modest unless otherwise noted. Names are listed in alphabetical order within each category of review. Please refer to for definitions of disclosure categories or additional information about the ACC/AHA Disclosure Policy for Writing Committees.ACC = American College of Cardiology; AHA = American Heart Association; EP = electrophysiology; HF = heart failure; HRS = Heart Rhythm Society; OHSU = Oregon Health & Science University; RWI = relationships with industry and other entities; STS = Society of Thoracic Surgeons; UT = University of Texas; VA = Veterans Affairs.Published online: January 28, 2019Developed in collaboration with the Society of Thoracic Surgeons.This document was approved by the American College of Cardiology Clinical Policy Approval Committee, the American Heart Association Science Advisory and Coordinating Committee, and the Heart Rhythm Society Board of Trustees in September 2018, and the American Heart Association Executive Committee in January 2019.The Heart Rhythm Society requests that this document be cited as follows: January CT, Wann LS, Calkins H, Chen LY, Cigarroa JE, Cleveland JC Jr, Ellnor PT, Ezekowitz MD, Field ME, Furie KL, Heidenreich PA, Murray KT, Shea JB, Tracy CM, Yancy CW. 2019 AHA/ACC/HRS focused update of the 2014 AHA/ACC/HRS guideline for the management of patients with atrial fibrillation: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Heart Rhythm* 2019;16:e66-e93. This article has been published in the *Journal of the American College of Cardiology* and *Circulation* Copies: This document is available on the websites of the American College of Cardiology (www.acc.org), the American Heart Association (professional.heart.org), and the Heart Rhythm Society (www.hrsonline.org). For copies of this document, please contact the Elsevier Inc. Reprint Department via fax (212-633-3820) or e-mail (email protected).Permissions: Multiple copies, modification, alteration, enhancement, and/or distribution of this document are not permitted without the express permission of the Heart Rhythm Society. Requests may be completed online via the Elsevier site (DOI: 10.1016/j.hrthm.2019.01.001) or by contacting the American College of Cardiology Foundation, the American Heart Association, Inc., and the Heart Rhythm Society.Access this article on ScienceDirect

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