



<b>Body System: Cardiovascular</b>			
<b>Session Topic: Atrial Fibrillation</b>			
<b>Educational Format</b>		<b>Faculty Expertise Required</b>	
<b>REQUIRED</b>	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.	
<b>OPTIONAL</b>	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u>	
<b>Professional Practice Gap</b>		<b>Learning Objective(s) that will close the gap and meet the need</b>	<b>Outcome Being Measured</b>
<ul style="list-style-type: none"> <li>Family physicians have a knowledge and performance gap related to the selection of appropriate cardiac imaging modality for specific cardiovascular problems.</li> <li>Physicians are often inconsistent with regard to therapeutic decision making for patients with AF.</li> <li>Physicians frequently exhibit poor communication between caregivers for elderly patients with AF.</li> <li>Physicians are inconsistent with their long-term management of AF patients.</li> <li>Physician adherence to oral anticoagulation therapy initiation is low among incident AF patients.</li> <li>AAFP/ACP updated joint guidelines for Management of Newly Detected Atrial Fibrillation.</li> </ul>		<ol style="list-style-type: none"> <li>Utilize current clinical practice guidelines for the management of AF, and the CHADS2 index to prescribe appropriate medications.</li> <li>Review the coagulation cascade and compare targets of medications that affect the coagulation pathway with specific applications to current recommendations of medications for patients with atrial fibrillation.</li> <li>Prepare treatment plans for patients (especially the elderly) who present with atrial fibrillation.</li> <li>Educate patients on lifestyle modifications they can make to ensure heart health and prevent complications from AF, including stroke or heart failure.</li> </ol>	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.
<b>Faculty Instructional Goals</b>			
Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art,			



science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.

- Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations
- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
  - Visit <http://www.aafp.org/journals> for additional resources
  - Visit <http://familydoctor.org> for patient education and resources
- Provide recommendations for the incorporation of current clinical practice guidelines for the management of AF, and the CHADS2 index to prescribe appropriate medications.
- Provide recommendations for reviewing the coagulation cascade and compare targets of medications that affect the coagulation pathway with specific applications to current recommendations of medications for patients with atrial fibrillation.
- Provide strategies and examples for preparing treatment plans for patients (especially the elderly) who present with atrial fibrillation.
- Provide strategies and resources to educate patients on lifestyle modifications they can make to ensure heart health and prevent complications from AF, including stroke or heart failure.
- Provide recommendations regarding guidelines for Medicare reimbursement.
- Provide recommendations to maximize office efficiency and guideline adherence to the diagnosis and management of AF.
- Provide an overview of newly available treatments, including efficacy, safety, contraindications, and cost/benefit relative to existing treatments.
- Provide instructions regarding the incorporation and use of the PCMH/ACO/Primary Care Core Measure Set into practice.

### Needs Assessment

*Supraventricular arrhythmias*, which include tachycardia, atrial flutter and atrial fibrillation (AF), the latter of which serves as the most common type of serious arrhythmia; with prevalence projected to increase from 5.2 million in 2010 to 12.1 million cases in 2030.<sup>1,2</sup> Chronic or long-term AF is associated with an increased risk of stroke, heart failure and mortality, especially among women.<sup>3</sup> While it becomes more common as people age, heavy alcohol use and an overactive thyroid can lead to the condition as well. Not only does AF serve as the most common arrhythmia in clinical practice, it also accounts for nearly one-third of hospitalizations for cardiac rhythm disturbances, affecting an estimated 2.3 million people in North America.<sup>3</sup>

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment survey indicate that family physicians have knowledge gaps with regard to evaluating and managing AF, effective use of electrocardiography, cardiovascular physical examination, and



cardiovascular pharmacology.<sup>4</sup> More specifically, CME outcomes data from 2012-2015 AAFP FMX (formerly Assembly): *Arrhythmias and Dysrhythmias*, and *Atrial Fibrillation* sessions suggest that physicians need additional continuing medical education with regard to ECG analysis; using CHADS2 score and HAS BLED scores to make clinical decisions; updates on new treatment therapies; educating patients on lifestyle modification and treatment adherence; and guideline adherence.<sup>5,6</sup> It is also important for physicians to keep up to date on new anticoagulant drugs for AF treatment.<sup>7</sup>

It is well established that interpretation of ECGs is within the scope of family medicine, and that the diagnosis and management of cardiovascular disorders is routinely taught in family medicine residency programs.<sup>8</sup> However, studies suggest that family practice residents have considerable deficiencies in ECG interpretation skills.<sup>9</sup> CME outcomes data from the 2012 AAFP Scientific Assembly session: *Electrocardiography and Internal Monitor Devices* suggests that over 57% of learners indicated a need for more advanced continuing education is the use of ECG. In practice, there is some evidence that primary care physicians have deficiencies regarding ECG interpretation that distinguishes normal physiological adaptations in athletes from abnormal findings suggestive of pathology; as well as deficiencies regarding accurate ECG diagnosis of atrial tachyarrhythmia using visual criteria rather than quantitative analysis.<sup>10-12</sup> Additionally, AAFP CME Needs Assessment Survey data indicates that family physicians have a statistically significant and meaningful knowledge gap related to the use of electrocardiography – i.e. electrocardiography is highly relevant to the management of patients in their practice, but did not feel comfortable with their medical skill to effectively use electrocardiography.<sup>4</sup>

Physicians are often inconsistent with regard to therapeutic decision making for patients with AF, frequently exhibit poor communication between caregivers, and are inconsistent with their long-term management of these patients.<sup>13-16</sup> In particular, physician adherence to oral anticoagulation therapy (OAT) initiation is low among incident atrial fibrillation (AF) patients, and more than one-third of the antiarrhythmic drugs (AADs) used in patients with AF and coronary artery disease (CAD) or heart failure did not conform to guideline recommendations.<sup>16,17</sup> Physicians need guidance on the use of risk assessment tools to support decision-making with regard to initiating antithrombotic therapy for stroke prevention in AF.<sup>14,18</sup>

Family physicians should be familiar with current guidelines and recommendations on managing atrial fibrillation.<sup>19,20</sup> The AAFP and the American College of Physicians developed joint guidelines for *Management of Newly Detected Atrial Fibrillation* in 2003, and later affirmed by the AAFP Board of Directors in 2008. As of May 2016, the guidelines are being updated. If available, by 2017 FMX, faculty should review the updates to the guideline, and educate learners on changes impacting their practice. Physicians may improve their care of patients with AF by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following (as of May 2016):<sup>21-23</sup>

- Rate control is the recommended treatment strategy in most patients with atrial fibrillation. Rhythm control is an option for patients in whom rate control is not achievable or who remain symptomatic despite rate control.
- Rhythm control of atrial fibrillation through electrical or pharmacologic cardioversion requires anticoagulation therapy three weeks before and four weeks after cardioversion.



- Rate control improves diastolic filling and coronary perfusion, decreases myocardial energy demand, and prevents tachycardia-mediated cardiomyopathy. The goal is to achieve a ventricular response of less than 80 beats per minute at rest and less than 110 beats per minute during exercise.
- Warfarin is more effective than aspirin in preventing thromboembolic events in patients with atrial fibrillation, although it confers a higher risk of bleeding. Warfarin is superior to aspirin plus clopidogrel and confers the same risk of bleeding. Adding full-dose aspirin to warfarin should be avoided because of the increased risk of bleeding.
- Patients with nonvalvular atrial fibrillation who are at low risk of stroke can be treated with 81 to 325 mg of aspirin per day.
- Rate control with chronic anticoagulation is the recommended strategy for the majority of patients with atrial fibrillation. Rhythm control has not been shown to be superior to rate control (with chronic anticoagulation) in reducing morbidity and mortality and may be inferior in some patient subgroups to rate control. Rhythm control is appropriate when based on other special considerations, such as patient symptoms, exercise tolerance, and patient preference. Grade: 2A.
- RECOMMENDATION 2: Patients with atrial fibrillation should receive chronic anticoagulation with adjusted-dose warfarin, unless they are at low risk of stroke or have a specific contraindication to the use of warfarin (thrombocytopenia, recent trauma or surgery, alcoholism). Grade: 1A.
- RECOMMENDATION 3: For patients with atrial fibrillation, the following drugs are recommended for their demonstrated efficacy in rate control during exercise and while at rest: atenolol, metoprolol, diltiazem, and verapamil (drugs listed alphabetically by class). Digoxin is only effective for rate control at rest and therefore should only be used as a second-line agent for rate control in atrial fibrillation. Grade: 1B.
- RECOMMENDATION 4: For those patients who elect to undergo acute cardioversion to achieve sinus rhythm in atrial fibrillation, both direct-current cardioversion (Grade: 1C+) and pharmacological conversion (Grade: 2A) are appropriate options.
- RECOMMENDATION 5: Both transesophageal echocardiography with short-term prior anticoagulation followed by early acute cardioversion (in the absence of intracardiac thrombus) with postcardioversion anticoagulation versus delayed cardioversion with pre- and postanticoagulation are appropriate management strategies for those patients who elect to undergo cardioversion. Grade: 2A.
- RECOMMENDATION 6: Most patients converted to sinus rhythm from atrial fibrillation should not be placed on rhythm maintenance therapy since the risks outweigh the benefits. In a selected group of patients whose quality of life is compromised by atrial fibrillation, the recommended pharmacologic agents for rhythm maintenance are amiodarone, disopyramide, propafenone, and sotalol (drugs listed in alphabetical order). The choice of agent predominantly depends on specific risk of side effects based on patient characteristics. Grade: 2A.

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may



result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Physicians should be kept up to date on new treatment therapies, changes to therapies, or warnings associated with existing therapies. Provide recommendations regarding new FDA approved medications used during treatment of atrial fibrillation; including safety, efficacy, tolerance, and cost considerations relative to currently available options. Some recent examples include, but are not limited to:<sup>24,25</sup>

- Savaysa (edoxaban); Daiichi Sankyo; For the treatment of deep vein thrombosis, pulmonary embolism and risk of stroke and embolism due to atrial fibrillation, Approved January 2015.
- Eliquis (apixaban); Bristol-Myers Squibb; For the prevention of stroke and systemic embolism resulting from nonvalvular atrial fibrillation, Approved December 2012.
- Xarelto (rivaroxaban); Janssen Pharmaceuticals; For the reduction in the risk of stroke and systemic embolism resulting from atrial fibrillation, Approved November 2011.
- Pradaxa (dabigatran etexilate mesylate); Boehringer Ingelheim; For the risk reduction of stroke and embolism due to atrial fibrillation, Approved October 2010.
- Multaq (dronedarone); Sanofi-aventis; For the treatment of paroxysmal or persistent atrial fibrillation or atrial flutter, Approved July 2009.

Physicians should also be made aware when the FDA posts warnings, such as how the use of the antibiotic azithromycin (Zithromax or Zmax) can lead to a potentially fatal irregular heart rhythm in people with certain risk factors.<sup>26</sup> Hospital readmissions for cardiac dysrhythmias, acute myocardial infarction, heart failure, and complications of surgical procedures are among the top 10 conditions with the most hospital readmission rates; therefore, physicians should focus on these areas for quality improvement and care coordination.<sup>27</sup>

The American Academy of Family Physicians Academy has participated in the Core Measures Collaborative (the Collaborative) convened by America's Health Insurance Plans (AHIP) since August 2014. The Collaborative is a multi-stakeholder effort working to define core measure sets of various specialties promoting alignment and harmonization of measure use and collection across both public and private payers.

Participants in the Collaborative included Centers for Medicare and Medicaid Services (CMS), the National Quality Forum (NQF), private payers, provider organizations, employers, and patient and consumer groups. This effort exists to decrease physician burden by reducing variability in measure selection, specifications and implementation— making quality measurement more useful and meaningful for consumers, employers, as well as public and private clinicians.

With significant AAFP input, a PCMH/ACO/Primary Care Core Measure Set has been developed for primary care. The goal of this set is to decrease burden and allow for more congruence between payer reporting programs.<sup>28</sup>



Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- Atrial fibrillation: diagnosis and treatment<sup>22</sup>
- AAFP/ACP Guidelines: Management of newly detected atrial fibrillation<sup>21</sup>
- ACCF/AHA/HRS Focused Update on the Management of Patients With Atrial Fibrillation<sup>20</sup>
- ACC/AHA Joint Guidelines<sup>29</sup>
- Updated Guidelines on Management of Atrial Fibrillation from the ACCF/AHA/HRS<sup>19</sup>
- Catheter ablation of supraventricular arrhythmias and atrial fibrillation<sup>30</sup>
- AMA PCPI Approved Quality Measure: Atrial Fibrillation and Atrial Flutter<sup>31</sup>
- Improving anticoagulation management at the point of care<sup>32</sup>
- A systematic approach to managing warfarin doses<sup>33</sup>
- Simple Tools to Increase Patient Satisfaction With the Referral Process<sup>34</sup>
- Engaging Patients in Collaborative Care Plans<sup>35</sup>
- Health Coaching: Teaching Patients to Fish<sup>36</sup>
- Encouraging patients to change unhealthy behaviors with motivational interviewing<sup>37</sup>

References

1. Colilla S, Crow A, Petkun W, Singer DE, Simon T, Liu X. Estimates of current and future incidence and prevalence of atrial fibrillation in the U.S. adult population. *The American journal of cardiology*. Oct 15 2013;112(8):1142-1147.
2. National Heart Lung and Blood Institute. What Is Atrial Fibrillation? 2011; <http://www.nhlbi.nih.gov/health/health-topics/topics/af/>. Accessed August, 2014.
3. Fuster V, Rydén LE, Cannom DS, et al. ACC/AHA/ESC 2006 Guidelines for the Management of Patients With Atrial Fibrillation—Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the European Society of Cardiology Committee for Practice Guidelines (Writing Committee to Revise the 2001 Guidelines for the Management of Patients With Atrial Fibrillation): Developed in Collaboration With the European Heart Rhythm Association and the Heart Rhythm Society. *Circulation*. August 15, 2006 2006;114(7):700-752.
4. AAFP. 2012 CME Needs Assessment: Clinical Topics. American Academy of Family Physicians; 2012.
5. American Academy of Family Physicians (AAFP). 2012 AAFP Scientific Assembly: CME Outcomes Report. Leawood KS: AAFP; 2012.
6. American Academy of Family Physicians (AAFP). 2013 AAFP Scientific Assembly: CME Outcomes Report. Leawood KS: AAFP; 2013.
7. Unger EF. Atrial fibrillation and new oral anticoagulant drugs. *Drugs: News & Events* 2014; <http://www.fda.gov/Drugs/NewsEvents/ucm405148.htm>. Accessed August, 2014.
8. American Academy of Family Physicians (AAFP). AAFP Policies: Electrocardiograms, Family Physician Interpretation of. 2001; <http://www.aafp.org/about/policies/all/electrocardiograms.html>. Accessed June, 2013.
9. Boltri JM, Hash RB, Vogel RL. Are family practice residents able to interpret electrocardiograms? *Advances in health sciences education : theory and practice*. 2003;8(2):149-153.



10. Drezner JA, Asif IM, Owens DS, et al. Accuracy of ECG interpretation in competitive athletes: the impact of using standised ECG criteria. *British journal of sports medicine*. Apr 2012;46(5):335-340.
11. Drezner JA, Ackerman MJ, Anderson J, et al. Electrocardiographic interpretation in athletes: the 'Seattle criteria'. *British journal of sports medicine*. Feb 2013;47(3):122-124.
12. Krummen DE, Patel M, Nguyen H, et al. Accurate ECG diagnosis of atrial tachyarrhythmias using quantitative analysis: a prospective diagnostic and cost-effectiveness study. *Journal of cardiovascular electrophysiology*. Nov 2010;21(11):1251-1259.
13. Ciervo CA, Granger Cb Fau - Schaller FA, Schaller FA. Stroke prevention in patients with atrial fibrillation: disease burden and unmet medical needs. *J Am Osteopath Assoc*. Sep 2012;112(9 Suppl 2):eS2-8.
14. Rosenman MB, Baker L, Jing Y, et al. Why is warfarin underused for stroke prevention in atrial fibrillation? A detailed review of electronic medical records. *Current medical research and opinion*. Sep 2012;28(9):1407-1414.
15. Fay MR, Montana C. What are the differences between physician and patient expectation with regard to the management of atrial fibrillation? *The journal of the Royal College of Physicians of Edinburgh*. 2012;42 Suppl 18:45-54.
16. Allen LaPointe NM, Lokhnygina Y, Sanders GD, Peterson ED, Al-Khatib SM. Adherence to guideline recommendations for antiarrhythmic drugs in atrial fibrillation. *American heart journal*. Nov 2013;166(5):871-878.
17. Beadles CA, Hassmiller Lich K, Viera AJ, Greene SB, Brookhart MA, Weinberger M. Patient-centered medical homes and oral anticoagulation therapy initiation. *Medical care research and review : MCRR*. Apr 2014;71(2):174-191.
18. Wang Y, Bajorek B. Safe use of antithrombotics for stroke prevention in atrial fibrillation: consideration of risk assessment tools to support decision-making. *Therapeutic advances in drug safety*. Feb 2014;5(1):21-37.
19. Lambert M. Updated Guidelines on Management of Atrial Fibrillation from the ACCF/AHA/HRS. *American family physician*. 2011;84(11):8.
20. Members WG, Wann LS, Curtis AB, et al. 2011 ACCF/AHA/HRS Focused Update on the Management of Patients With Atrial Fibrillation (Updating the 2006 Guideline): A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *Circulation*. January 4, 2011 2011;123(1):104-123.
21. Snow V, Weiss KB, LeFevre M, et al. Management of newly detected atrial fibrillation: a clinical practice guideline from the American Academy of Family Physicians and the American College of Physicians. *Annals of internal medicine*. Dec 16 2003;139(12):1009-1017.
22. Gutierrez C, Blanchard DG. Atrial fibrillation: diagnosis and treatment. *American family physician*. Jan 1 2011;83(1):61-68.
23. American Academy of Family Physicians (AAFP). Atrial Fibrillation. *Clinical Practice Guideline* 2003; <http://www.aafp.org/patient-care/clinical-recommendations/all/atrial-fibrillation.html>. Accessed May, 2016.
24. Beck RA, King W Mt. Apixaban (eliquis) for stroke prevention in atrial fibrillation. *American family physician*. Apr 15 2014;89(8):672-675.



25. CenterWatch. FDA Approved Drugs by Medical Condition. 2016; <https://www.centerwatch.com/drug-information/fda-approved-drugs/medical-conditions/>. Accessed Apr, 2016.
26. Azithromycin Poses Risk of Potentially Fatal Arrhythmias, FDA Warns. *AAFP News*. 2013. <http://www.aafp.org/news/health-of-the-public/20130315azithromycin-risk.html>. Accessed June 2015.
27. Hines AL, Barrett ML, Jiang HJ, Steiner CA. Conditions With the Largest Number of Adult Hospital Readmissions by Payer, 2011: Statistical Brief #172. In: AHRQ, ed. *Healthcare Cost and Utilization Project (HCUP) Statistical Briefs*. Rockville MD 2014.
28. American Academy of Family Physicians (AAFP). PCMH/ACO/Primary Care Core Measure Set. 2016; <http://www.aafp.org/practice-management/improvement/measure.html>. Accessed May, 2016.
29. American Heart Association. ACC/AHA Joint Guidelines. 2014; [http://my.americanheart.org/professional/StatementsGuidelines/ByTopic/TopicsA-C/ACCAHA-Joint-Guidelines\\_UCM\\_321694\\_Article.jsp](http://my.americanheart.org/professional/StatementsGuidelines/ByTopic/TopicsA-C/ACCAHA-Joint-Guidelines_UCM_321694_Article.jsp). Accessed August, 2014.
30. Shapira AR. Catheter ablation of supraventricular arrhythmias and atrial fibrillation. *American family physician*. Nov 15 2009;80(10):1089-1094.
31. Estes NAMEa. ACC/AHA/PCPI Atrial Fibrillation and Atrial Flutter Physician Performance Measurement Set. *PCPI and PCPI Approved Quality Measures 2007*; <http://www.ama-assn.org/apps/listserv/x-check/qmeasure.cgi>. Accessed April, 2013.
32. Caffee AE, Teichman PG. Improving anticoagulation management at the point of care. *Family practice management*. Feb 2002;9(2):35-37.
33. Ebell MH. A systematic approach to managing warfarin doses. *Family practice management*. May 2005;12(5):77, 79-80, 83.
34. Jarve RK, Dool DW. Simple tools to increase patient satisfaction with the referral process. *Family practice management*. Nov-Dec 2011;18(6):9-14.
35. Mauksch L, Safford B. Engaging Patients in Collaborative Care Plans. *Family practice management*. 2013;20(3):35-39.
36. Ghorob A. Health Coaching: Teaching Patients to Fish. *Family practice management*. 2013;20(3):40-42.
37. Stewart EE, Fox CH. Encouraging patients to change unhealthy behaviors with motivational interviewing. *Family practice management*. May-Jun 2011;18(3):21-25.