



Advancing High Performance Health

## AMGA Member Best Practices

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*Heart Rhythm Society, Houston Methodist  
Coordinated Care, BayCare Health System*

***The Power of Healthcare  
Systems to Deliver Guideline-  
Recommended Care for Atrial  
Fibrillation (AF) Stroke Risk  
Reduction***

A close-up photograph of a computer keyboard. The focus is on a single, large, blue key that has the word "webinar" printed on it in a white, lowercase, sans-serif font. The surrounding keys are white and slightly out of focus. The background is a light blue with a subtle grid pattern.

## The Power of Healthcare Systems to Deliver Guideline-Recommended Care for Atrial Fibrillation (AF) Stroke Risk Reduction



left to right:

**Anne Marie Smith, M.B.A.**, Vice President of Practice Improvement, Heart Rhythm Society

**Julia Andrieni, M.D., FACP**, Senior Vice President, Population Health and Primary Care, President and CEO, Houston Methodist Coordinated Care, and Associate Professor, Clinical Medicine, Weill Cornell Medical School

**Mahesh Amin, M.D., FACC**, Medical Director, CV Service Line, BayCare Health System/BayCare Medical Group

**Webinar, January 13, 2021**

*“[We] already know that science, evidence, and data matter; that cost and value matter, that gaps in care and outcomes matter; that clinician satisfaction matters; and, of course, that individual patients matter. Therefore, our focus [in this presentation] will be primarily on what you can do about the gaps, the costs, the care, the clinician satisfaction, and, most importantly, the patient outcomes [with respect to AF].”*

— Anne Marie Smith, M.B.A.

### AF and Stroke

Atrial fibrillation (AF) is an irregular heart rhythm disorder that can increase the risk of stroke by blood clots forming in the upper chambers of the heart that can circulate to other organs, such as the brain.<sup>1</sup> The prevalence of AF in the United States is expected to increase from 5.2 million in 2010 to 12.1 million cases in 2030.<sup>2</sup> Having AF increases one’s risk of stroke approximately 5-fold.<sup>3</sup> About 23% of Medicare patients with AF are readmitted within 30 days of hospital discharge, which is comparable to other chronic cardiovascular conditions, such as heart failure.<sup>4</sup>

Evidence-based guidelines, such as the 2019 AHA/ACC/HRS Focused Update to the 2014 guideline for the management of patients with AF, strongly recommend oral anticoagulation for AF patients with a high CHA<sub>2</sub>DS<sub>2</sub>-VASc score ( $\geq 2$  for men,  $\geq 3$  for women).<sup>5</sup> However, a retrospective study conducted by PCORI between 2012 and 2015 found that ~84% of AF patients hospitalized for acute ischemic stroke had not received therapeutic anticoagulation before the stroke.<sup>6</sup> Thus, healthcare systems have an important opportunity to improve patient outcomes by improving anticoagulation adherence to these guidelines.

### Models to Help Address Care Gaps

There can be a gap between evidence and policy—an evidence-based recommendation typically takes about 9 years to be widely implemented in general practice.<sup>7,8</sup> To shorten the delay and bridge this gap between science and practice, healthcare systems must find ways to educate providers and implement guideline recommendations.

Addressing care gaps for AF patients was the subject of a webinar presented by Ms. Anne Marie Smith of the Heart Rhythm Society, Houston Methodist Coordinated Care's Dr. Julia Andrieni, and Dr. Mahesh Amin of BayCare Health System/BayCare Medical Group. They shared how different healthcare systems are approaching this challenge.

Addressing care gaps is particularly difficult in primary care, since providers must manage many different conditions. For this reason, clinical decision support at the point of care is needed. Ms. Smith explained, "[The Heart Rhythm Society] is pursuing many avenues to help improve AF-related stroke risk reduction, including a licensing agreement with Pfizer recognizing their NVAF EHR Tool Kit [Nonvalvular AF Electronic Health Record Tool Kit] as a Quality Education Resource. This tool kit offers EHR instructions that may help institutions better manage their AF patient population." (See Figure 1.)

**Figure 1**



## Closing the Gap

Two leading healthcare organizations, BayCare Medical Group and Houston Methodist Coordinated Care, are working to improve adherence to the guidelines for reducing the risk of stroke among patients with AF.

Both organizations identified similar care gaps for patients with AF and took the following steps to address these gaps:

- Identified patients with AF or atrial flutter at risk for stroke based on their CHA<sub>2</sub>DS<sub>2</sub>-VASc score
- Reviewed patients' medication lists for the presence of an active anticoagulant prescription
- Included clinical decision support at the point of care
- Compiled data to determine the number of at-risk patients who were not treated according to evidence-based guidelines
- Coordinated an educational effort delivered by a passionate clinical expert

**BayCare Medical Group** is a leading not-for-profit healthcare system that includes 15 hospitals and hundreds of community locations throughout the Tampa Bay and West Central Florida regions. It is a Medicare Shared Savings Program (MSSP) Track 3 participant with a Centers for Medicare & Medicaid Services (CMS) risk-based contract that includes both upside and downside financial risk.

**Houston Methodist Coordinated Care Accountable Care Organization (HMCC ACO)** is an MSSP Track 3 participant with a CMS risk-based contract that includes both upside and downside financial risk. HMCC had the highest CMS quality metrics score (99.5%) last year nationally for MSSP Track 3. Currently, HMCC ACO High Value Primary Care network includes 89 primary care practices within the greater Houston area with over 271 providers caring for 39,000 Medicare fee-for-service (FFS) beneficiaries.

These initiatives involved many stakeholders. Crucial support was provided by the information technology staff who enhanced the EHRs to provide better support for clinicians at the point of care. In addition, nurses, medical interns, and pharmacy interns were enlisted to support the initiatives.

## BayCare Medical Group

Dr. Amin explained how the BayCare Medical Group took steps to improve adherence to the anticoagulation guidelines for patients with AF.

According to Dr. Amin, less than 20% of AF patient records had documentation of the CHA<sub>2</sub>DS<sub>2</sub>-VASc score. To address this gap in care, data that is often already in the EHR was leveraged to automatically calculate the CHA<sub>2</sub>DS<sub>2</sub>-VASc score.

BayCare convened a group of stakeholders (see Figure 2) and added the following functionalities to its Cerner EHR:

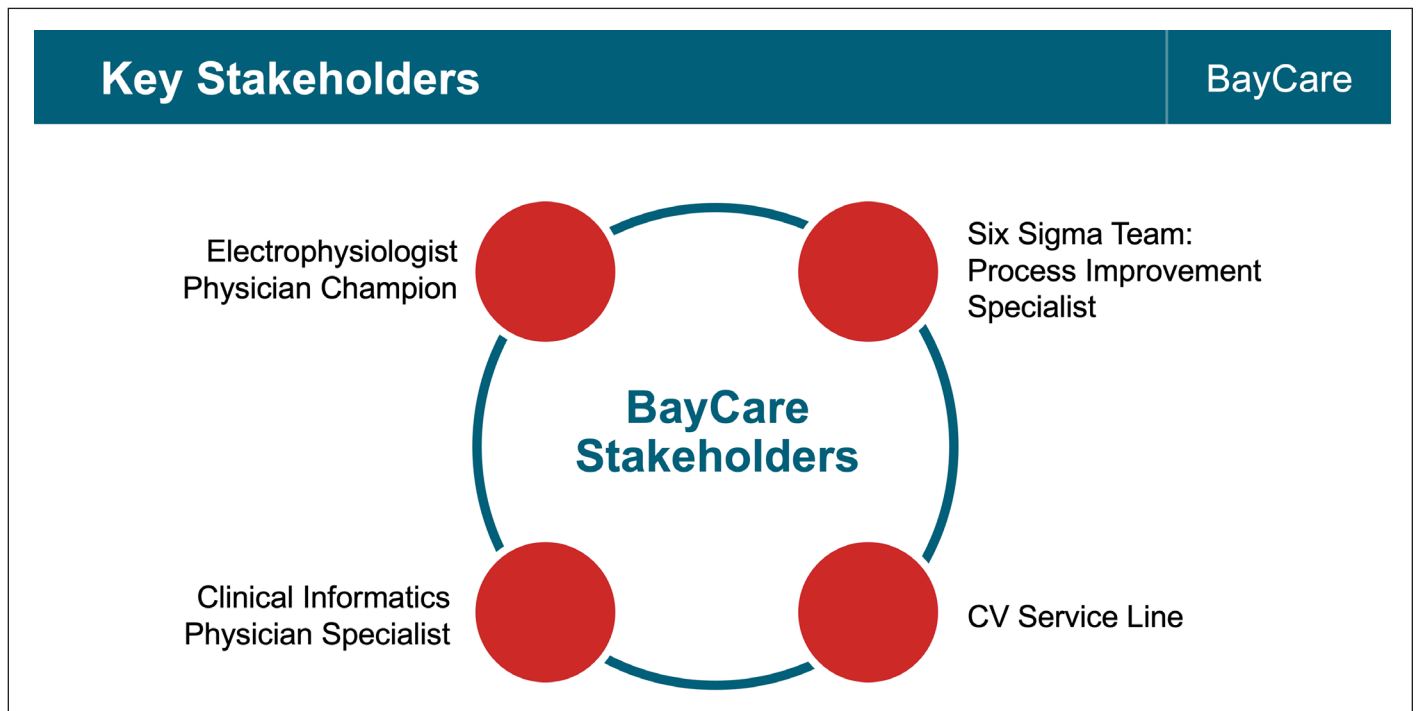
- A custom PowerForm that calculates the patient’s CHA<sub>2</sub>DS<sub>2</sub>-VASc score (a measure of stroke risk in AF patients) was built and embedded in a health maintenance alert

*“Less than 20% of the patients actually had a CHA<sub>2</sub>DS<sub>2</sub>-VASc score calculated in their notes at discharge. ... If you don’t calculate the CHA<sub>2</sub>DS<sub>2</sub>-VASc score, you will not initiate anticoagulation.”*

— Dr. Mahesh Amin

- The patient’s HAS-BLED score (a measure of the risk of major bleeding) was added to the PowerForm
- Health maintenance alerts for CHA<sub>2</sub>DS<sub>2</sub>-VASc and anticoagulation were configured
- A customized AF care gap report and HealthRegistry (Cerner’s health registry) were created
- An AF process quality metric requiring the documentation of CHA<sub>2</sub>DS<sub>2</sub>-VASc for cardiology and hospital inpatients was implemented for 2020

**Figure 2**



- The quality metric and the changes in workflow were communicated throughout cardiology and inpatient
- Educational resources for professionals and patients are included in the EHR workflow

By midyear, the percentage of documented CHA<sub>2</sub>DS<sub>2</sub>-VASc scores had increased to 51%, with the hopes of being over 80% by December 31, 2020.

### Houston Methodist Coordinated Care Accountable Care Organization (HMCC ACO)

Dr. Andrieni explained how HMCC ACO followed a step-by-step plan to improve the prevention of stroke among patients with AF. The initiative began with a pilot program funded by a grant from the Heart Rhythm Society and the American College of Physicians. This pilot program screened 200 at-risk primary care patients for AF. The patients with AF were then educated about stroke risk. After the educational initiative, >94% of patients expressed an increased understanding of AF and risk factors for AF.

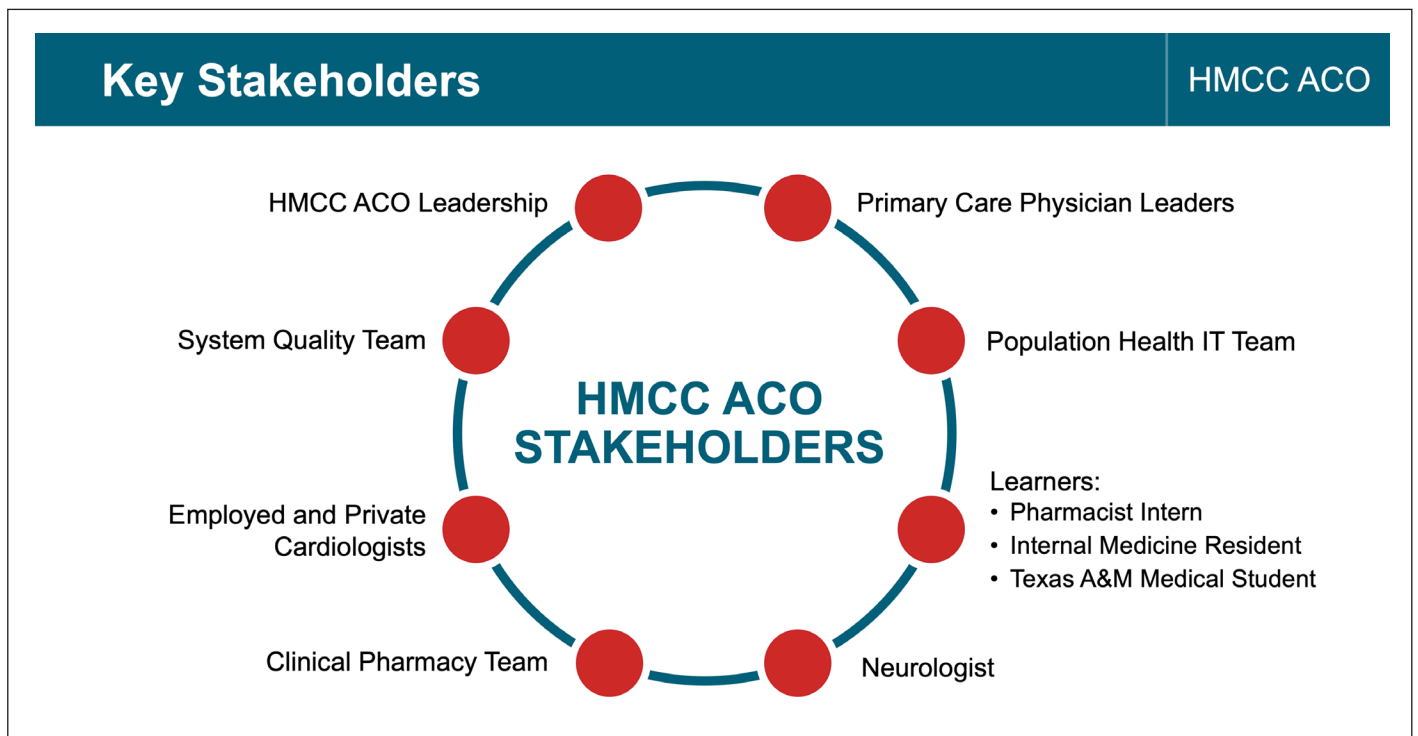
*“I think the physicians have embraced [CHA<sub>2</sub>DS<sub>2</sub>-VASc documentation in the EHR]... for the right reason of giving good care to their patients.”*

— Dr. Mahesh Amin

Based on the results of the pilot effort, HMCC ACO recognized the opportunity to improve AF-related patient outcomes through evidence-based guideline standardization. HMCC ACO convened a diverse group of stakeholders (see Figure 3) and implemented the following steps to address care gaps:

- Continued educating primary care providers about stroke prevention for AF patients via grand rounds
- Reviewed the CHA<sub>2</sub>DS<sub>2</sub>-VASc risk score for the Medicare population to identify patients at high risk of stroke (CHA<sub>2</sub>DS<sub>2</sub>-VASc ≥2) due to AF who were not on anticoagulation

**Figure 3**



- Created a registry identifying specific at-risk patients
- Informed providers about those patients within their panel who were at risk
- Updated the EHR so that it automatically calculated the CHA<sub>2</sub>DS<sub>2</sub>-VASc score
- Measured stroke risk at the point of care for all Medicare FFS patients and ACO patients via the CHA<sub>2</sub>DS<sub>2</sub>-VASc tool

Dr. Andrieni noted, “We had 35% of our ACO population at risk because they had a CHA<sub>2</sub>DS<sub>2</sub>-VASc score of 2 or greater and they were not on anticoagulation.” (See Figure 4.)

As a result of the interventions, within 6 months, there was a 7% increase in closing the AF-related care gap through appropriate anticoagulation and a 6% increase in cardiology consults for patients at increased AF-related stroke risk.

*“The reality is if you don’t really measure your data, you don’t know what your care gap [is].”*

— Dr. Julia Andrieni

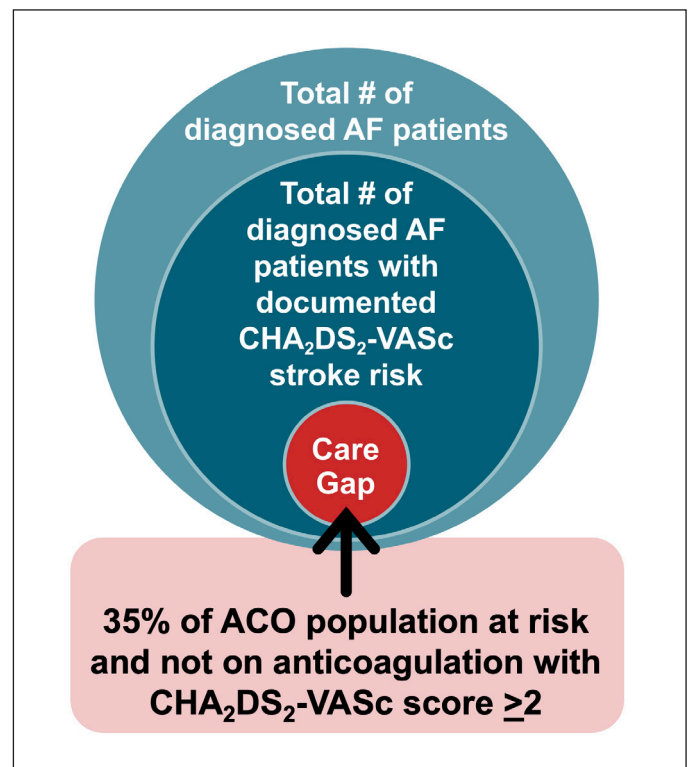
As a next step, HMCC ACO’s information technology team is developing a best practice alert in Epic that will appear at the point of care when patients have a CHA<sub>2</sub>DS<sub>2</sub>-VASc score  $\geq 3$  and are not on anticoagulation. Finally, HMCC ACO is beginning a pharmacy initiative to decrease the risk of dosing errors for anticoagulants.

Ms. Smith concluded that the examples shared demonstrate the importance of addressing AF care gaps. As a result, health systems can leverage these case studies to implement similar programs in support

*“[The patients] really had no idea and didn’t understand what AF was, or stroke risk. And these were people identified as at potential risk for AF. So that was really good to get [education] out to the patients and to the public.”*

— Dr. Julia Andrieni

**Figure 4**



of improved patient outcomes and more efficient healthcare delivery. Healthcare systems are encouraged to reach out to the Heart Rhythm Society, the speakers from BayCare and Houston Methodist, or Pfizer for support and information regarding initiating their own AF-related stroke risk reduction effort. See contact information at the end of this summary.

**Q:** *What are your next steps for promoting guideline-based oral anticoagulation for patients with AF?*

**A:** **Dr. Andrieni:** Because of the COVID-19 pandemic, we want to make it possible for patients to take their medication without leaving home. So we are looking at anticoagulants that don't require much laboratory monitoring, such as measurement of the international normalized ratio (INR).

**Q:** *How did you incorporate educational materials, and what materials do you use?*

**A:** **Dr. Amin:** We have materials for many diseases, not just AF, already sitting in our EHR system. We print them out and hand them to our patients as they are leaving an office visit or being discharged from the hospital. The handouts are written at an 8th-grade level so they are easy to understand.

**Dr. Andrieni:** Our patient education effort was funded by a grant from the Heart Rhythm Society and the American College of Physicians, so we used their standardized patient education materials. Many professional organizations offer patient-facing materials that you can use within your practices.

**Q:** *How do you address contraindications to oral anticoagulants?*

**A:** **Dr. Amin:** Our PowerForm notes if the patient has contraindications to anticoagulation. If some other approach, such as a left atrial appendage closure device, is being used for stroke prevention, the PowerForm should capture and present that information.

**Dr. Andrieni:** In the workflow that we are designing, a best practice alert will appear when a patient has an indication for oral anticoagulation. The order form for the oral anticoagulant lists the exclusions to be managed. We are trying to make this workflow easy to use so that physicians will be more likely to use it at the point of care. The workflow will also offer educational resources for physicians and patients, as well as serve as a means of documentation.

**Q:** *What about tools or resources for shared decision-making?*

**A:** **Dr. Andrieni:** Oral anticoagulation for patients with AF is just one of many opportunities for shared decision-making. In primary care, we use shared decision-making broadly. It's a quality metric for which our network is held accountable.

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