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

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Note: Speakers do not have any disclosures.
HRS Vision and Mission

VISION
To end death and suffering due to heart rhythm disorders

MISSION
To improve the care of patients by promoting research, education, and optimal health care policies and standards

• Global, nonprofit medical society
• Leading resource for electrophysiology and heart rhythm care
• Over 7000 members representing medical, allied health, and science professionals
• More than 70 countries represented
Burden of AF

AF is a growing health care concern in the United States

A retrospective study with a natural history progression model showed

THE PREVALENCE OF AF IS EXPECTED TO INCREASE\(^1\)

2010

5.2 million

2030

12.1 million

The prevalence is expected to grow from 5.2 million cases in 2010 to nearly 12.1 million cases in 2030\(^1\)

Patients with AF are nearly 5X as likely to have a stroke than patients without AF\(^2\)

Stroke risk attributed to AF significantly increases with age (≥50 years old)\(^2\)

In an analysis of the National (Nationwide) Inpatient Sample (NIS), 2003-2014, Acute ischemic stroke in patients with AF is associated with higher morbidity, longer hospital length of stay (LOS), and higher costs vs stroke not related to AF\(^3\)

Burden of AF

Based on weighted estimates from the HCUP National Emergency Department Sample (NEDS),* more than half of emergency department (ED) visits for patients with AF resulted in hospitalization¹

PROPORTION OF ED VISITS ADMITTED OR DISCHARGED, 2016*

Patients with AF as a primary diagnosis

- 49% Discharged
- 51% Admitted

N=588,850

Patients with AF as a secondary diagnosis

- 38% Discharged
- 62% Admitted

N=4,704,531

Primary AF diagnosis refers to AF as the principal diagnosis. Secondary AF diagnosis refers to AF as the nonprincipal diagnosis.

HCUP=Healthcare Cost and Utilization Project.

*Weighted national estimates from 2016 HCUP NEDS, Agency for Healthcare Research and Quality (AHRO), based on data collected by individual states and provided to AHRO by the states. Total number of weighted visits in the United States based on HCUP NEDS was 144,842,742. Estimates based on International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) principal and nonprincipal diagnosis codes that identify atrial fibrillation: I48.0, I48.1, I48.2, and I48.91.

The national 30-day readmission rate for Medicare patients with AF is 23%, comparable with other chronic CV conditions.*

*National 30-day readmission rates for 21 chronic conditions examined by CMS

CV=cardiovascular.

*Hospital readmissions are expressed as a percentage of all admissions. A 30-day readmission is defined as an admission to an acute care hospital for any cause within 30 days of discharge from an acute care hospital. Except when the patient died during the stay, each inpatient stay is classified as an index admission, a readmission, or both. The data used in the chronic condition reports are based upon CMS administrative enrollment and claims data for Medicare beneficiaries enrolled in the FFS program. The information is limited to Medicare FFS beneficiaries residing in the 50 states and the District of Columbia, who were continuously enrolled in Medicare FFS, Parts A and B, for 2017. Beneficiaries who were enrolled in the MA plan were excluded.

†Includes rheumatoid arthritis and osteoarthritis.

Update to the 2014 AHA/ACC/HRS Guideline for the Management of Patients With Atrial Fibrillation

It is estimated that it takes an average of 9 years for interventions recommended as evidence-based practices (EBPs) to be fully adopted.1,2

AF and Oral Anticoagulants (OACs): Gaps in Care

Real-world data show that many patients at higher risk for stroke are not treated with anticoagulants¹

![DISTRIBUTION OF THERAPIES FOR PATIENTS WITH AF, BY CHA2DS2-VASC SCORES*](image)

N=953,386

Percentages may not add to 100% due to rounding.

*Based on data from the National Cardiovascular Data Registry (NCDR) Practice Innovation and Clinical Excellence (PINNACLE) Registry quarterly report and may not represent actual numbers in your system. The PINNACLE Registry is an ongoing database predominantly composed of cardiology outpatient EHRs.

AF and OACs: Gaps in Care

In a 2012-2015 retrospective study from the Patient-Centered Outcomes Research Institute (PCORI), ~84% of patients with AF hospitalized for acute ischemic stroke had not received therapeutic anticoagulation pre-stroke.

The National Quality Forum (NQF) has developed a care model\(^1\)
This model demonstrates one way a health system may address stroke-risk management by incorporating the measurement domains essential for evaluating care at both the system and health care provider (HCP) levels.

BayCare is a leading not-for-profit health care system that connects individuals and families to a wide range of services at 15 hospitals and hundreds of other convenient locations throughout the Tampa Bay and West Central Florida regions.

BayCare is a Medicare Shared Savings Program Track 3 with a CMS risk-based contract to include both upside and downside financial risk.
Based on a patient’s CHA\textsubscript{2}DS\textsubscript{2}-VASc score, providers recognize the need to anticoagulate appropriately based on evidence-based guidelines.

- Low utilization of anticoagulation in patients with AF based on EHR
- Majority of hospital discharge notes did not document CHA\textsubscript{2}DS\textsubscript{2}-VASc score
Key Stakeholders

- Electrophysiologist
- Physician Champion
- Clinical Informatics
- Physician Specialist
- Six Sigma Team: Process Improvement Specialist
- CV Service Line

BayCare Stakeholders
Actions

- Optimized the EHR capability to include a PowerForm to electronically calculate and capture CHA$_2$DS$_2$-VASc and HAS-BLED scores in a health maintenance (HM) alert
- The form enabled documentation of legitimate reason for exclusion
- The calculated score autopopulates into the physician’s note
- Configured HM alerts for CHA$_2$DS$_2$-VASc and anticoagulation
- Created a customized AF care gap report and HealtheRegistry
Scaling and Communication

- Built a communication tool and shared it with stakeholders
- Developed and implemented an AF quality metric for cardiology and inpatient for 2020
- Added an incentive around that quality metric that impacts quality bonus for compliance with the new process
- Communicated quality metrics and changes in workflow throughout cardiology and inpatient
Outcomes

Documentation of the CHA$_2$DS$_2$-VASc score has increased to 51% from less than 20%

Providers offered positive and constructive feedback

“Quality health care means doing the right thing at the right time in the right way for the right person and having the best results possible.”

—Definition of Quality, BayCare Team Member Training
Next Steps

Ongoing analytics regarding documentation of CHA$_2$DS$_2$-VASc and appropriate guideline-based anticoagulation management

Adding an additional provider compensation incentive for implementation and sustainability of the population health solution
HMCC ACO Prioritizes AF as a Quality Initiative

- High Value Primary Care network includes 70 primary care practices within the greater Houston area with over 250 providers caring for 33,000 Medicare FFS beneficiaries
- A Medicare Shared Savings Program with a CMS risk-based contract to include both upside and downside financial risk
- Had the highest CMS quality metrics score of 99.5% last year nationally for Medicare Shared Savings Track 3 programs
Patients with AF have an ~5-fold increased risk for stroke compared with those without AF\textsuperscript{1}

Medicare Shared Savings Program ACOs with financial risk are responsible for an aging vulnerable population at increased risk for AF

Medicare Shared Savings Program and bundle populations are growing and fit into a quality improvement strategy for at-risk patients to improve outcomes for patients with AF

Key Stakeholders

HMCC ACO Leadership
Primary Care Physician Leaders
System Quality Team
Population Health IT Team
Employed and Private Cardiologists
Learners:
  - Pharmacist Intern
  - Internal Medicine Resident
  - Texas A&M Medical Student
Clinical Pharmacy Team
Neurologist

HMCC ACO STAKEHOLDERS
Integration of AF screening of 200 at-risk patients with a technology-enabled device within a busy primary care practice did not slow down workflow.

94% of patients expressed increased awareness about stroke risk after AF screening.

Primary care physicians gained additional medical history with an AF screening pilot that generated referrals.

Opportunity to engage learners (medical students, residents, and fellows); provides education and research opportunities for posters, abstracts, and papers.

Goal: Educate patients on AF and stroke risk within primary care practices.
Primary Care Provider Education
• Grand rounds for primary care providers on AF and stroke risk reduction
• CHA$_2$DS$_2$-VASc Best Practices handouts provided to primary care providers
• Identify and educate regarding the need for appropriate provider documentation of reasons for not utilizing anticoagulation in patients at high risk for stroke

CHA$_2$DS$_2$-VASc Risk Score Implementation in EHR
• Systemwide implementation of a risk stratification tool with score interpreted into annual stroke risk rate

Systemwide Pharmacy Initiative
• Improve ordering of anticoagulants to reduce dosing errors
Quality Improvement Step-by-Step Initiative

**Diagnosis**
Screen patients at risk in employed primary care practices for a diagnosis of AF or atrial flutter.

**Stroke Risk**
Calculate CHA$_2$DS$_2$-VASc scores for all Medicare patients attributed to HMCC ACO.

**Anticoagulant**
Review medication lists in Epic for the presence of an active anticoagulant prescription.

**Quantify “The Gap”**
Compile data to determine the number of patients who lack anticoagulation.

35% of ACO population at risk and not on anticoagulation with CHA$_2$DS$_2$-VASc score $\geq 2$.
7% increase
in closing AF-related care gaps
(by using guideline-based AF anticoagulation management) by primary care physicians (PCPs)

6% increase
in cardiology consults
for patients at increased risk of stroke due to their AF
Next Steps

1. Build on Quick Wins from Quality Improvement (QI) Initiative after PCP education and CHA$_2$DS$_2$-VASc implementation in EHR

2. Best practice alert (BPA) implementation at point of care for high CHA$_2$DS$_2$-VASc score* and not on appropriate treatment

3. Continually reassess gaps in care for HMCC ACO primary care practices to support sustainability at the PCP and practice level

4. Consider implementation of the HAS-BLED score integrated in EHR at point of care for patient bleeding risk

5. Collaboration between cardiology and PCPs for co-management

*High CHA$_2$DS$_2$-VASc score $\geq 3$. 
Nonvalvular Atrial Fibrillation (NVAF) EHR Tool Kit

Reviewed by the Heart Rhythm Society and recognized as a quality educational resource

Pfizer/BMS NVAF EHR Tool Kit contains:

• CHA₂DS₂-VASc Overview
• CHA₂DS₂-VASc Calculator
• CHA₂DS₂-VASc Alert
• Shared Decision-Making Documentation Log
• NVAF Patient EHR Registry
• Appendix: ICD-10 Codes Examples
The Power of Health Care Systems to Deliver Guideline-Recommended Care for Atrial Fibrillation (AF) Stroke Risk Reduction
Questions?
Thank You!

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