

### BACKGROUND

Atrial fibrillation (AFib) poses a serious stroke risk, yet documentation gaps often leave critical decisions about anticoagulation unclear.

Individuals with AFib are nearly



more likely to have a stroke than individuals without AFib<sup>1</sup>

According to a retrospective study sponsored by PCORI and published in JAMA,



of patients admitted to hospitals\* with an acute ischemic stroke, a known history of AFib, and a prestroke CHA<sub>2</sub>DS<sub>2</sub>-VASc score  $\geq 2$ were NOT receiving guidelinerecommended therapeutic anticoagulation<sup>2</sup>

According to the same PCORI study,



Of patients with a moderate-to-high risk of stroke did **not have** documented reasons for not being treated with an anticoagulant<sup>2</sup>

\*Patients with a known history of Afib or atrial flutter who had experienced an acute ischemic stroke and were admitted from October 2012 through March 2015 to hospitals participating in the Get With the Guidelines-Stroke program

### **SMARTER OBJECTIVE**

Improve documentation of non-anticoagulation decisions for AFib patients in an outpatient primary care clinic, exceeding a 34.2% benchmark set by a New England Journal of Medicine Patient-Centered Outcomes Research Institute (**PCORI**) study. **This was achieved** using a targeted OPA tool for moderate-to-high risk AFib patients not on anticoagulation. The tool helped alert providers to at-risk patients and document reasons for non-anticoagulation. OPA calculated and provided CHA<sub>2</sub>DS<sub>2</sub>-VASc and HAS-BLED scores using rule-based logic to provide that data in real time.

# Enhancing Quality of Care in Atrial Fibrillation Using Our Practice Advisories (OPA): **One Year Review**

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### **IMPROVEMENT ACTION PLAN WITH ACTIONS TAKEN**



### **STUDY DESIGN**

The study was conducted at the WVU Department of Family Medicine (University Town Center). An OPA based on the CHA<sub>2</sub>DS<sub>2</sub>-VASc score was implemented between March 2023 and January 2025.

- $CHA_2DS_2$ -VASc OPA: Alerts for anticoagulation in males with a score  $\geq 2$  and females with a score  $\geq 3$ . • Study Population: 164 patients with AFib from the Department of Family Medicine UTC clinic seen during the intervention period.
- Comparative Group: 58,084 AFib patients from the POCI study.

The OPAs provided real-time decision support, helping guide anticoagulation therapy based on individual risk factors (Figure 1). Providers were able to prescribe or better discuss anticoagulation therapy based on these automated alerts.

ACTIVE	E PATIENT		Impo	ortant (1)							*
FYI		() P	atient has afib/flu	ient has afib/flutter and a CHA2DS2-VASc score that indicates anticoagulation should be considered.							
Next A	Next Appt: 03/03/2025            ••• CHA2DS2-VASc Stroke Risk          PCP: Me            Based on EMR information, this patient has a CHA2DS2-VASc score of: 3, and a HAS-BLED score of: 2. -• See link below for information on how this patient's score was awarded and clinical significance										
Allergi	Allergies (5) Lin CH. et al. 2009. © 2010 American College of Chest Physicians										
ACTIVE IRC (VE WE	ACTIVE TREATMENTS IRON SUCROSE (VENOFER) – 300 MG WEEKLY X 3 DOSES			Open SmartSet       Do Not Open       Anticoagulants for atrial fib/flutter Preview         Add Visit Diagnosis       Do Not Add       Contraindication to anticoagulation therapy							
My Pat + Care Pa	My Pat List Reminders: None + Care Paths: COPD Care Path					Click here for risk score breakdown and supporting data					
Verbal Receive	Verbal Communication Auth Received: Yes				Patient refused High bleed risk High risk for falling Recent surgery Recent major trauma						
				Anticoagulation r	not indicated Sco	re inaccura	ate Other (comment)				
									✓ <u>A</u> ccept	<u>C</u> ancel	
CHADS VASC Score Breakdown for   CHA2DS2-VASC Risk Score   Congestive Heart Failure   Hypertension   Age >/= 75   Diabetes   History of Stroke, TIA, or T   Vascular Disease   Age 65-74   Sex Category   Total *Risk calculation potentially limited CHA2DS2-VASC Score	DS VASC Score Breakdown for         C       H ⊕ ি ि ि         May DS 2-VASC Risk Score       HAS-BLED Bleed Risk Score *         Imagestive Heart Failure       0       Uncontrolled hypertension       0         Opertension       1       Abnormal renal function       0         Imagestive Heart Failure       0       Uncontrolled hypertension       0         Imagestive Heart Failure       0       Abnormal renal function       0         Imagestive Heart Failure       0       Abnormal renal function       0         Imagestive Heart Failure       0       Abnormal renal function       0         Imagestive Meart Failure       0       Prior major bleeding or predisposition to       0         Imagestive Meart Pail       1       Age > 65       1       1         Imagestive Meart Pail       1       Age > 65       1       1         Imagestive Meart Pail       1       Age > 65       1       1         Imagestine Mearestine Mail       Male Paile				<b>Figure 1</b> - Workflow for the CHA <sub>2</sub> DS <sub>2</sub> -VASc Our Practice Advisory (OPA) for atrial fibrillation patients. Workflow starts as a sidebar notification and provides more data and options the more it is interacted with. This includes both the CHA <sub>2</sub> DS <sub>2</sub> -VASc and HAS-BLED scoring systems.						
0	Embolism (% year) ** 0.3% 0.9%	0	year) ** 0.9% 3.4%								

0	0.3%	0	0.9%
1	0.9%	1	3.4%
2	2.9%	2	4.1%
3	4.6%	3	5.8%
4	6.7%	4	8.9%
5	10.0%	5	9.1%
6	13.6%	>5	-
7	15.7%		
8	15.2%		
9	17.4%		

\* Risk figures from <u>Friberg L, 2012</u> European Heart Journal \*Risk figures from Lip, 2011 Journal of the American College of Cardiology

CHADS VASC S

- Acknowledgement reasons selected: 57
- Higher bleeding risk than stroke risk: 17
- New anticoagulation started: 6
- Contraindication to anticoagulation added: 2

OPA interaction alone **facilitated documented reasoning** for not anticoagulating in 39.6% (65/164) of cases during the study period.

The OPA display also had a **statistically significant impact** on anticoagulation decisions ( $\chi^2 = 103.7293$ , P < 0.00001).

Additionally, **DFM clinic anticoagulation rates increased** from 67.1% (418/623) to 68.7% (451/657) during the study period.

In discussions/working with cardiology leadership and Cupid support team to disseminate to WVU Medicine at a system level within the following weeks/months.

Feedback from family med & cardiology has already lead to OPA changes in minor appearance. The information from this system will be used to build registry data for future research and analytics to better help care for this vulnerable patient population.

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## WVUMedicine

### RESULTS

OPA Displayed: **164 patients** 

### **SCALE UP PLAN**

### SUSTAINABILITY PLAN

### **LESSONS LEARNT**

OPAs are an effective tool for educating clinicians, increasing awareness, and promoting the implementation of standard-of-care interventions.

Primary care providers feel more confident managing anticoagulation in atrial fibrillation when risk information is easily accessible and presented in real time.

Reasons for not initiating therapy can be documented more efficiently when tied to a simple acknowledgment process rather than relying solely on provider-entered documentation.

### REFERENCES

P A Wolf, R. D. (1991). Atrial fibrillation as an independent risk factor for stroke: the Framingham Study. Stroke, 22(8),

Ying Xian, M. P., Emily C. O'Brien, P., & Li Liang, P. (2017). Association of Preceding Antithrombotic Treatment With Acute Ischemic Stroke Severity and In-Hospital Outcomes Among Patients With Atrial Fibrillation. JAMA, 317(10),