

Background

Atrial fibrillation (Afib) is an arrhythmia that can lead to blood clots, stroke, heart failure and other heart-related complications. Currently, between 2.7-6.1 million Americans are living with Afib, with the prevalence expected to rise to 12.1 million in 2030 and 17.9 million in 2060.

Stroke Demographics:

- Strokes have an incidence of 795,000 cases per year in the United States
- Cerebrovascular disease prevalence was 42.4 million people in 2015
- Direct and indirect cost of stroke in 2018 was \$40.1 billion
- WV Ranks 45th in death rates for CVD, CHD, and stroke

State	CVD			CHD			Stroke		
	Rank	Death	%	Rank	Death	%	Rank	Death	%
		Rate	Change, '03-'05 to '13- '15		Rate	Change, '03-'05 to '13- '15		Rate	Change, '03-'05 to '13- '15
West	45	258.8	-26.6	46	120.8	-34.7	44	43.3	-23.3
Virginia									
Ohio	40	247.5	-22.1	44	111.6	-33.8	38	40.2	-24.4
Pennsylvania	36	229.9	-25.1	34	102.5	-35.7	33	37.6	-25.0
North	31	221.8	-27.4	26	94.6	-35.8	45	43.4	-30.3
Carolina									
Maryland	32	222.5	-25.1	32	101.0	-37.2	29	37.3	-27.7
Virginia	26	208.5	-28.1	15	84.5	-35.7	34	37.8	-33.5

Table 1: Age-Adjusted Death Rates per 100,000 population for CVD, CHD, and Stroke by State, 2013 to 2015. Table adapted from Table 12-2 page e252 of the AHA heart disease and stroke statistics.

Objectives

- Assess the compliance rate of anticoagulation use for patients with atrial fibrillation according to national standards
- Identify barriers preventing clinical education and evidencebased medical practices
- Assess the potential value of a quality improvement intervention aimed at increasing compliance rate with national standards

Methods

We reviewed 184 charts from October 1, 2018 until May 15, 2019 (pre-intervention period) and 32 charts from June 11, 2019 until September 1, 2019 using any diagnosis code that contained "atrial fibrillation." A total of 34 charts were excluded due to the following: deceased patient or deactivated status.

Pre-intervention charts were assessed for compliance with the 2014 AHA/ACC guidelines on atrial fibrillation:

> \succ Antiplatelet agents if CHA₂DS₂VASc score of 1 > Anticoagulation if CHA₂DS₂VASc score ≥ 2

Post-intervention charts were assessed for compliance with the 2019 AHA/ACC IA or IIB recommendations on atrial fibrillation

- \blacktriangleright Anticoagulation if CHA₂DS₂VASc score of ≥ 1 (IIB) or ≥ 2 (IA) in males
- → Anticoagulation if CHA_2DS_2VASc score of ≥ 2 (IIB) or ≥ 3 (IA) in females

QI/QA: Compliance with National Atrial Fibrillation Anticoagulation Guidelines in a Rural Primary Care Clinic

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Intervention

An intervention was planned to provide education and awareness to the healthcare providers of the clinic. The intervention included:

- > Oral presentation including current clinic compliance rate with 2014 national guidelines, sample group demographics, and education on 2019 national guidelines
- Clinicians were provided a pocket card and signage was placed in provider dictation areas summarizing 2019 AHA/ACC recommendations
- Patient education fliers were placed throughout the clinic
- \succ EHR macro for easy computation of CHA₂DS₂VASc scores within patient charts was developed

Results

Pre-Intervention:

- > A total of 184 patient charts were reviewed, with 33 excluded due to deactivated status or deceased patient
- \succ Of the charts reviewed, 92/151 (60.9%) met guideline goals for treatment
- \geq 25/151 (16.6%) were provided no antiplatelet or anticoagulant, while 34/151 (22.5%) were provided an inappropriate medication Post-Intervention:
- > a total of 32 charts were reviewed with 1 exclusion due to patient death
- \geq 27/31 (87.1%) met IA or IIB guidelines
- > 2/31 (6.45%) were counseled not to take anticoagulation by cardiology despite having met IA guidelines
- > 2/31 (6.45%) did not meet guidelines based on inappropriate clopidogrel use
- The calculated compliance rate included patients not on medications with a clearly documented contraindication

Guideline Compliance %



□ Guideline Compliance

Average Age – 74.2 Sex: Males – 79; Females – 73 CHA2DS2VASc average score – 3.5 CHA2DS2VASc mode – 3



Post-Intervention

Average Age – 77.7 Sex: Males – 76; Females – 80 CHA2DS2VASc average score – 3.6 CHA2DS2VASc mode – 3

Discussion

WV ranks 45th in the United States for stroke deaths. Stroke prevention is necessary to improve the health of our state and clinic population. CHA₂DS₂VASc scores correlate directly with stroke risk per year for patients with atrial fibrillation. Furthermore, patients with atrial fibrillation require annual recalculation of their score to better provide appropriate stroke prophylaxis. In addition to risk calculation, providers are responsible for staying up-to-date on current guidelines.

Post-intervention analysis revealed a statistically significant improvement in guideline compliance between pre- and postintervention groups. We found providers to be receptive to the information presented and willing to adopt to the guideline change. Limitations to this study included:

- reviewed

Future Directions

- their individual compliance rate
- patient education and compliance rate
- extended post-intervention period

Conclusion

Further work at the community level is required to ensure patients with atrial fibrillation are receiving risk calculations and are being medically managed in a manner congruent with current national guidelines.

Works Cited

- July 2019; 74 (1)
- 3. AHA Heart Disease and Stroke Statistics (2018)
- 4. American Heart Association (AHA.org)
- 10.7326/M18-1177
- fibrillation. Chest. 2010;137(2):263-72.

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Limited attendance at the oral presentation Shorter post-intervention period with fewer charts

Provider and clinic administration turnover

Develop an intervention program to educate providers of

Provide the clinic with various resources for enhancing

Assess provider compliance with guidelines following an

L. 2014 AHA/ACC/HRS Guideline for the Management of Patients with Atrial Fibrillation. Circulation. 2014 Dec 2; 130(23): e199-e267 2. 2019 AHA/ACC/HRS Focused Update of the 2014 AHA/ACC/HRS Guideline for the Management of Patients with Atrial Fibrillation. JACC.

5. Annals of Internal Medicine. Brief Research Report January 1, 2019. DOI:

6. Lip GY, Nieuwlaat R, Pisters R, et al. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial

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