



University of South Florida
**GERIATRIC
WORKFORCE
ENHANCEMENT
PROGRAM (GWEP)**
Learn@Lunch
Geriatric Education Series

Kathryn Hyer, PhD, MPP
Principal Investigator



Providers of
Continuing Education

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Asa Oxner, MD, is an Assistant Professor in the USF Morsani College of Medicine Department of Internal Medicine. Dr. Oxner oversees the Suncoast Community Health Centers GWEP Clinic in Palm River, where she trains interdisciplinary teams of health professions students in geriatric care and treats the clinic's medically vulnerable older adult patients.

Dr. Oxner graduated from the USF College of Medicine in 2011 and completed her residency in Internal Medicine at Beth Israel Deaconess Medical Center in Boston. Following her fellowship at Harvard Medical School, she returned to USF in 2014 to teach and treat patients at USF's Morsani Center for Advance Healthcare and Byrd Alzheimer's Institute.

Dr. Oxner is active in numerous local and international humanitarian programs including outreach to people living on the streets of Tampa with Tampa Bay Street Medicine; HIV/Ebola response and care of children in Sierra Leone; and medical relief for the devastated citizens of Puerto Rico following Hurricane Irma.

Please join us in welcoming Dr. Oxner for her presentation on the *Advantages & Disadvantages of Anticoagulant Therapy in the Treatment of Atrial Fibrillation in the Elderly*.





Atrial Fibrillation in the Elderly: Causes, Symptoms, and Treatment

Asa Oxner, MD

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Co-Investigator: Geriatric Workforce Enhancement Grant

Conflicts of Interest

- I have no conflicts of interest to disclose

Learning Objectives

Understand

Understand who develops afib
(which patients are at risk)

Learn

Learn to identify symptoms of afib

Improve

Improve triage of afib complications in the outpatient setting

Review

Review common treatments of afib so you can call attention to medication errors and side effects

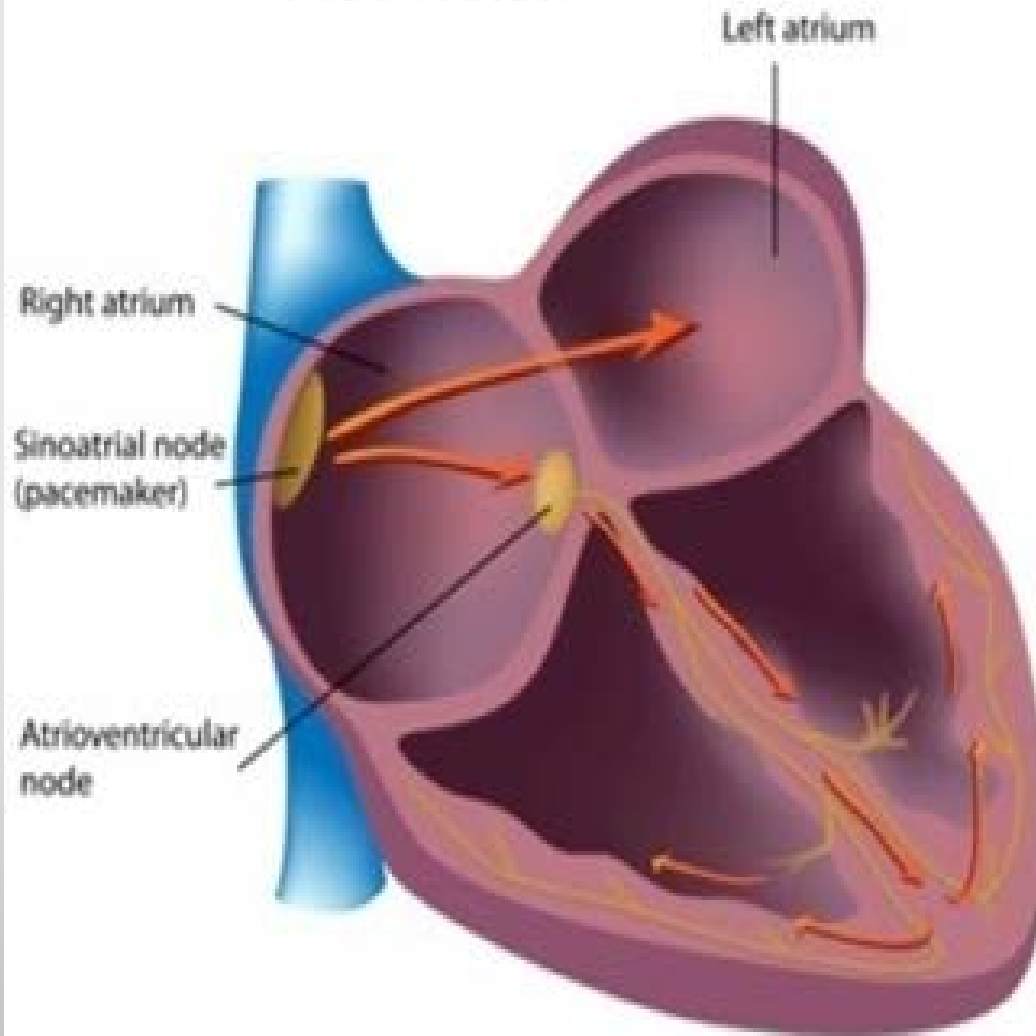


Atrial Fibrillation – Definition

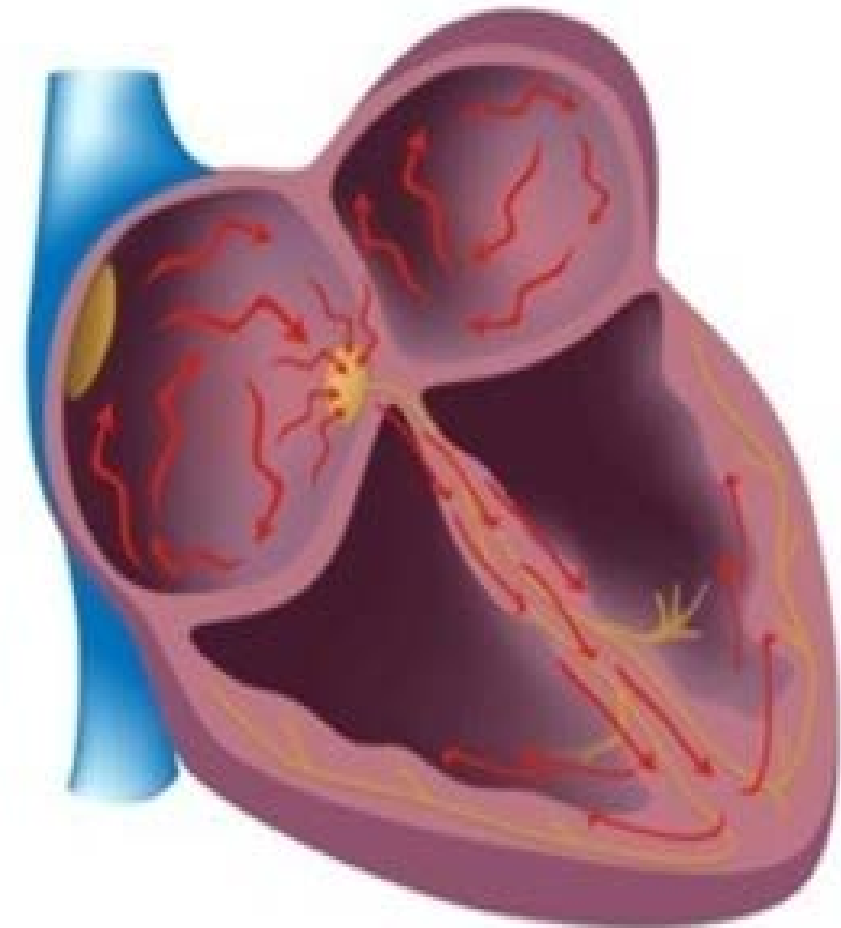
- Atrial Fibrillation (AKA Afib) is an irregular electrical activity that starts in the upper chambers of the heart
- Can make the heart rate slow or fast
- Can be intermittent or constant
- Results in an increased risk of stroke

Electrical Pattern of Normal Heart vs. Afib

Normal



Atrial Fibrillation



Who develops afib?

- More common as you get older – up to 10% of the geriatric population
- 80% of afib patients will have heart disease
- History of heart attacks
- Risk factors for heart attacks
- Enlarged atria of the heart
- Disease of heart valves (mitral valve or aortic valve)
- Heart failure

Who develops afib? (part 2)

- Hyperthyroidism
- Sleep apnea
- COPD/smoker's lung
- Genetic (family history of afib)
- Patients who get sepsis or pneumonia

Atrial Fibrillation



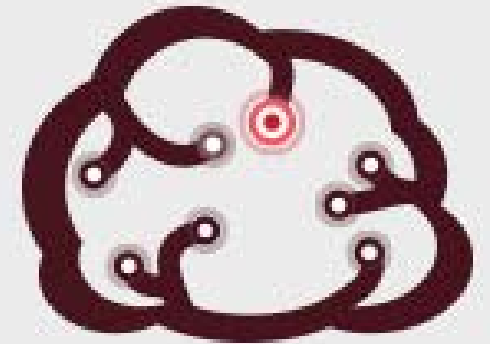
5 Million

Approximately 5 million people in the U.S. have AFib.



5 Times

AFib patients are five times more likely to suffer a stroke.



15-20%

15-20% of all strokes are AFib-related.

Symptoms of Afib

Asymptomatic

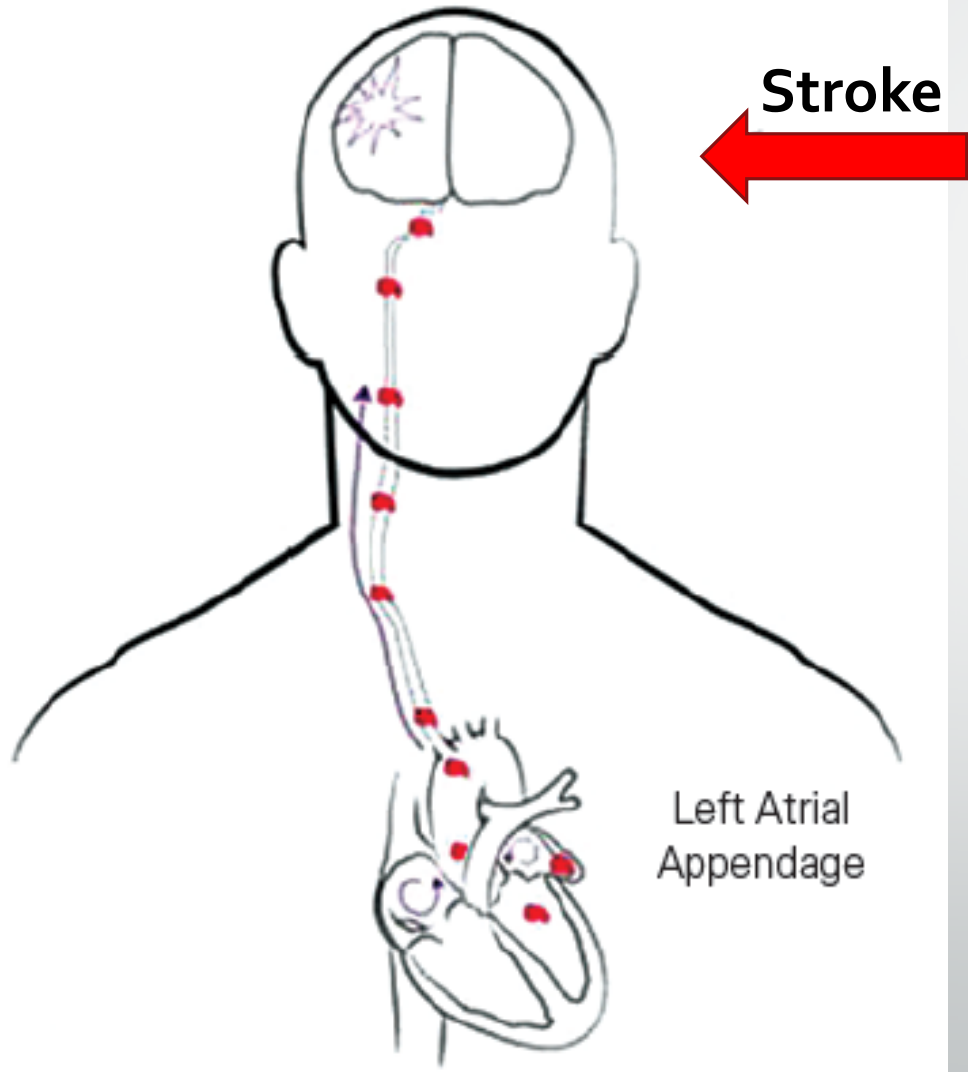
Stroke

Heart failure

- Facial droop
- Suddenly unable to speak
- Slurred Speech
- Unable to move arm or leg
- Sudden loss of vision

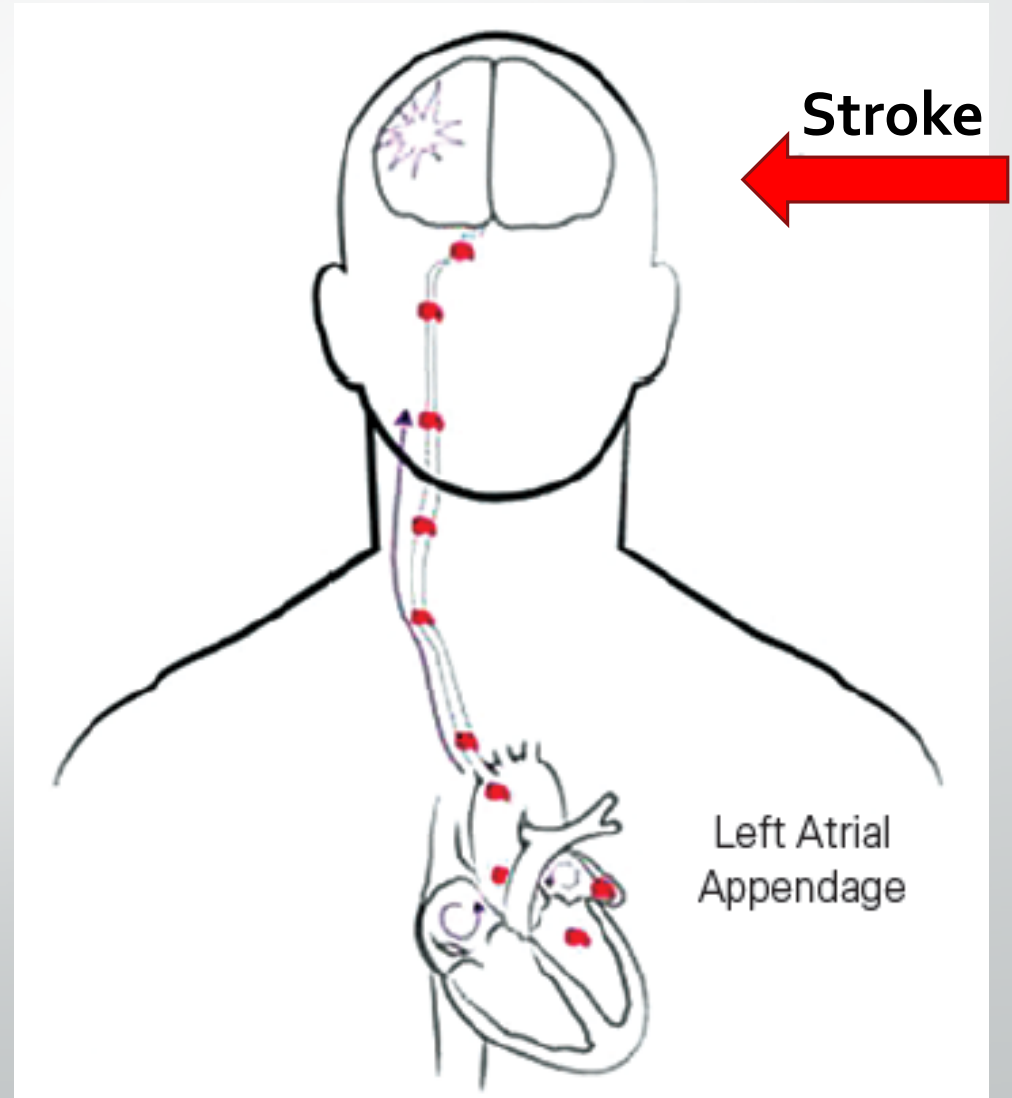
- Tiredness
- Shortness of breath
- Exercise intolerance
- Leg swelling
- Lightheadedness or dizziness

Most common complications of Afib



Complications of Afib—Stroke

- 1-15% per patient per year
- Chance of having a stroke per year can be calculated using a tool called the CHADS₂-VASC score



Afib Increases your risk of having a stroke

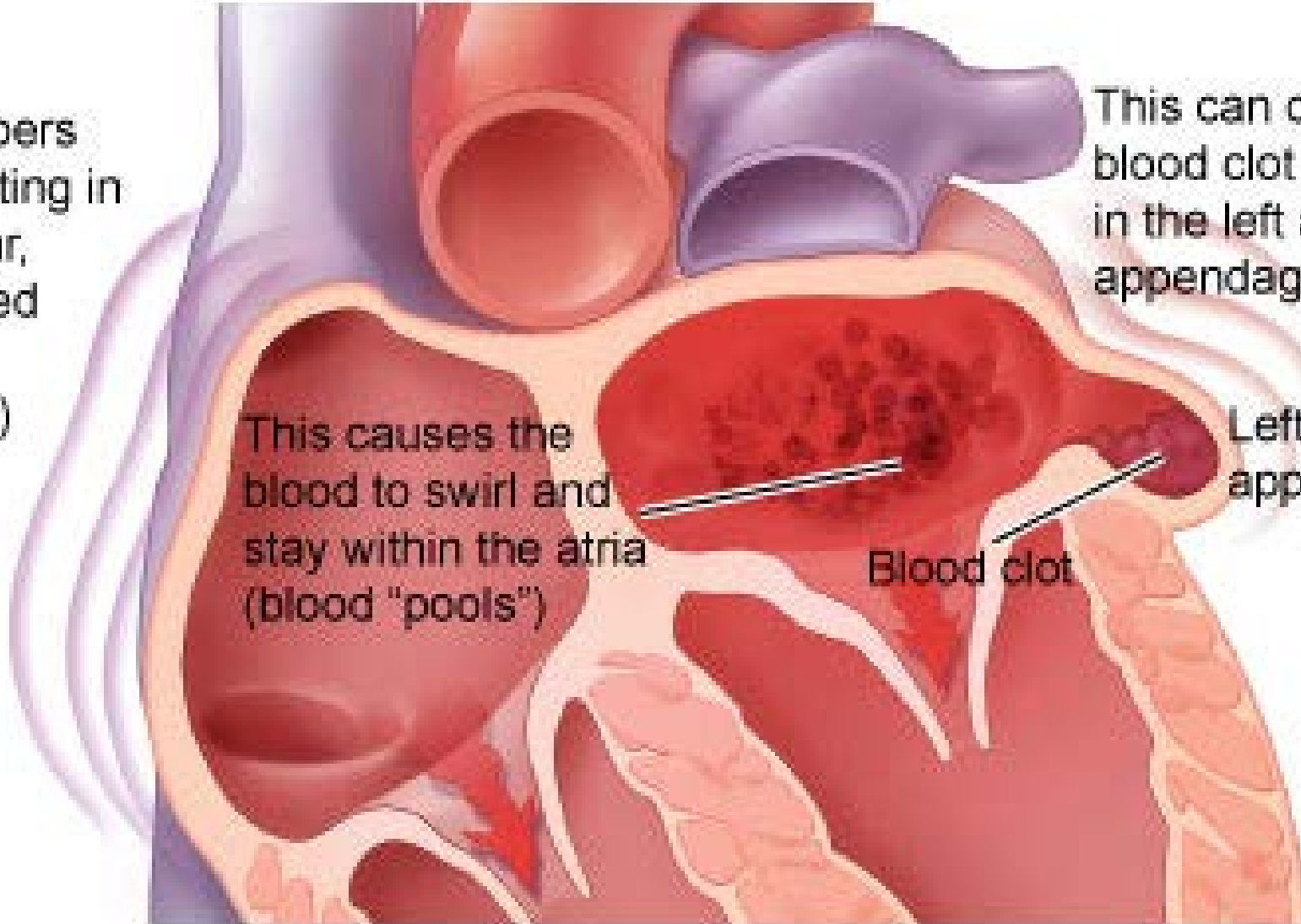
Top chambers (atria) beating in an irregular, uncontrolled manner (fibrillating)

This causes the blood to swirl and stay within the atria (blood "pools")

This can cause a blood clot to form in the left atrial appendage

Left atrial appendage

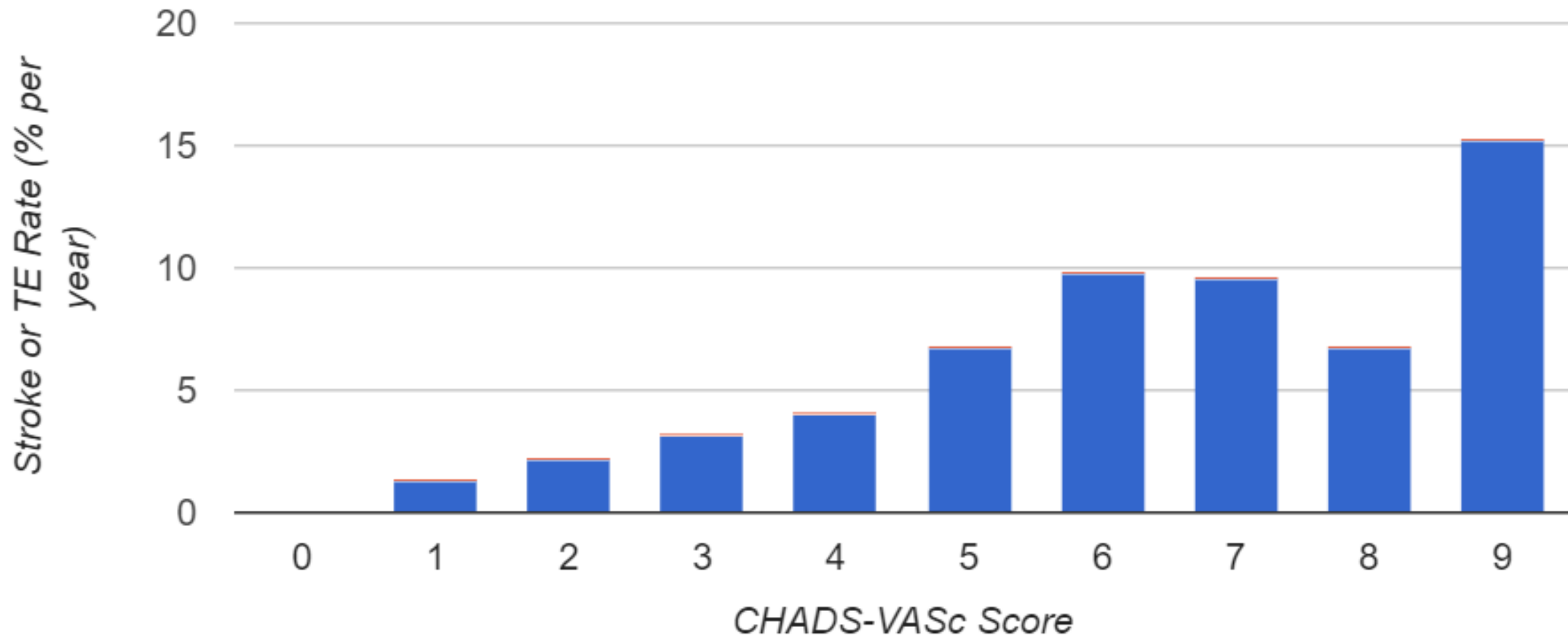
Blood clot



CHADS-VASC Calculator

Criteria		Poss. Point
Congestive heart failure Signs/symptoms of heart failure confirmed with objective evidence of cardiac dysfunction	<input type="radio"/> Yes <input type="radio"/> No	+1
Hypertension Resting BP > 140/90 mmHg on at least 2 occasions <u>or</u> current antihypertensive pharmacologic treatment	<input type="radio"/> Yes <input type="radio"/> No	+1
Age 75 years or older	<input type="radio"/> Yes <input type="radio"/> No	+2
Diabetes mellitus Fasting glucose > 125 mg/dL or treatment with oral hypoglycemic agent and/or insulin	<input type="radio"/> Yes <input type="radio"/> No	+1
Stroke, TIA, or TE Includes any history of cerebral ischemia	<input type="radio"/> Yes <input type="radio"/> No	+2
Vascular disease Prior MI, peripheral arterial disease, or aortic plaque	<input type="radio"/> Yes <input type="radio"/> No	+1
Age 65 to 74 years	<input type="radio"/> Yes <input type="radio"/> No	+1
Sex Category (female) Female gender confers higher risk	<input type="radio"/> Yes <input type="radio"/> No	+1
<input type="button" value="Reset"/> <input type="button" value="Calculate"/>		

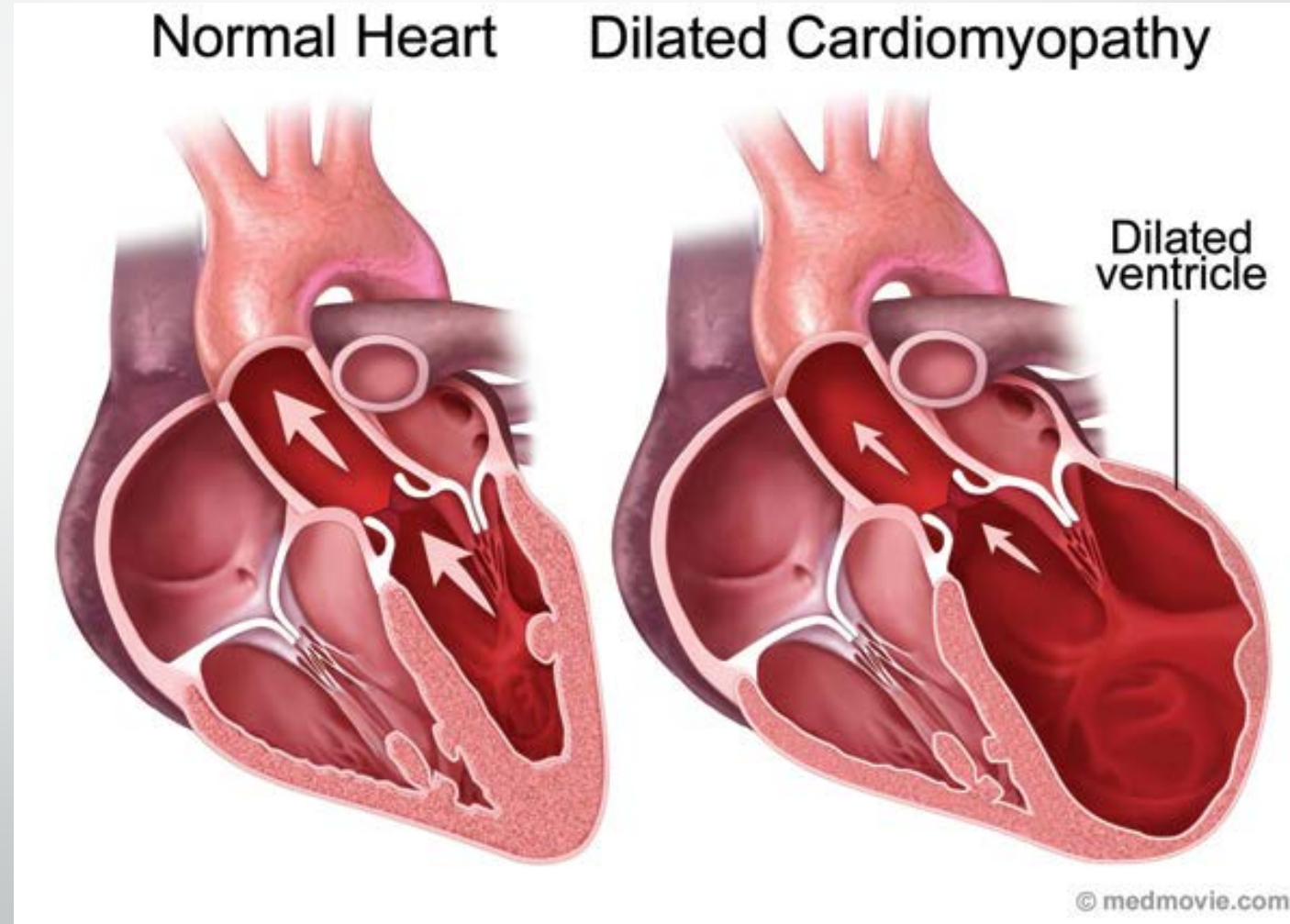
Rate of Stroke per year depends on CHADS-VASc



How to Triage Stroke from Afib

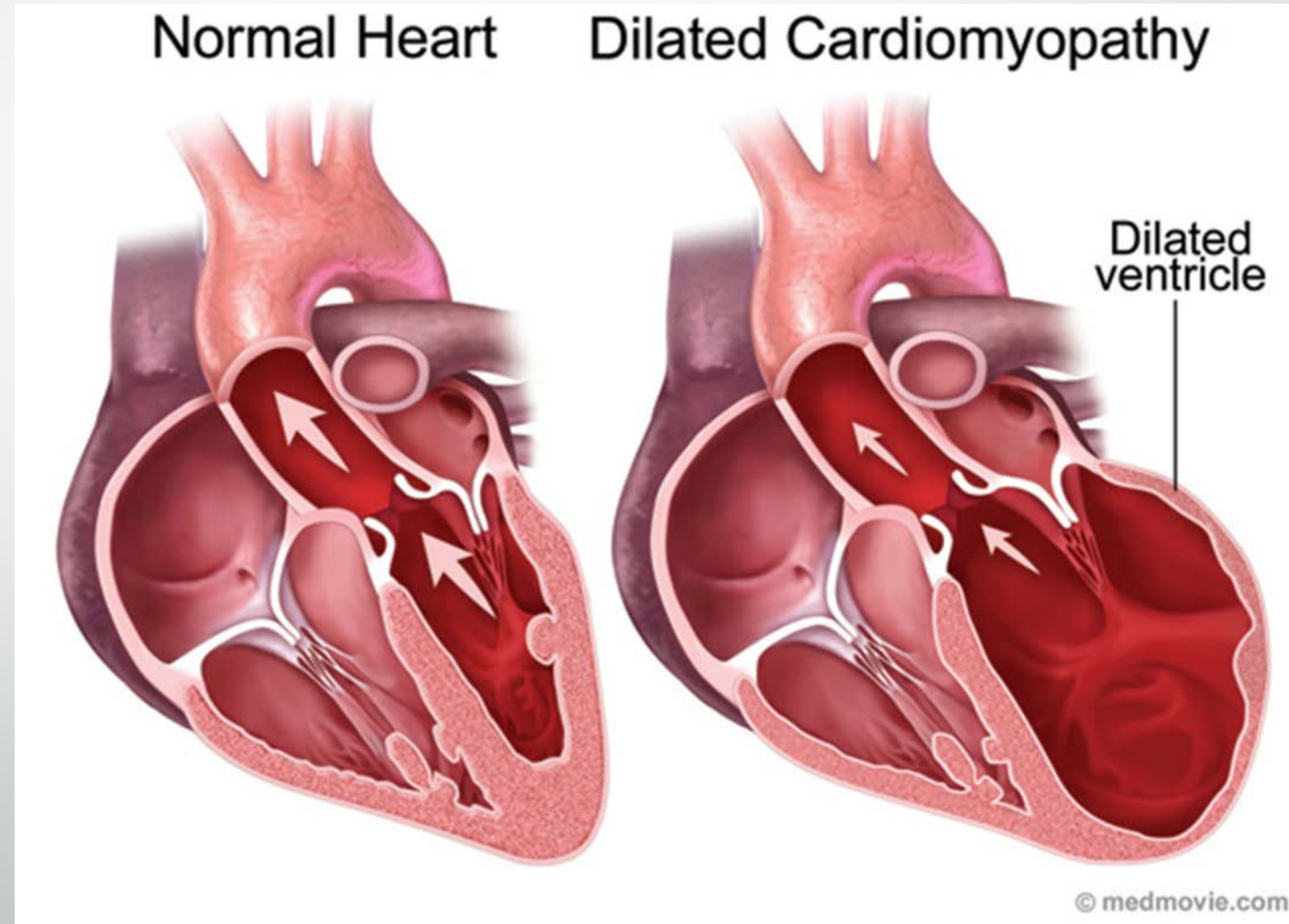
- All suspected strokes should be immediately referred to the hospital

Most common complications of Afib



Complications of Afib—Heart Failure

- Afib can cause heart failure
- Heart failure from other causes can be exacerbated by afib



Failure of regular pumping = back-up

- Into the lungs
- Into the veins of the legs





**Shortness
of Breath**



**Swelling of
feet & legs**



**Chronic lack
of energy**



**Difficulty sleeping
at night due to
breathing problems**



**Swollen or tender
abdomen with
loss of appetite**




**Cough
with frothy
Sputum**



**Increased
urination
at night**



**Confusion and/or
impaired memory**



How to triage heart failure and afib

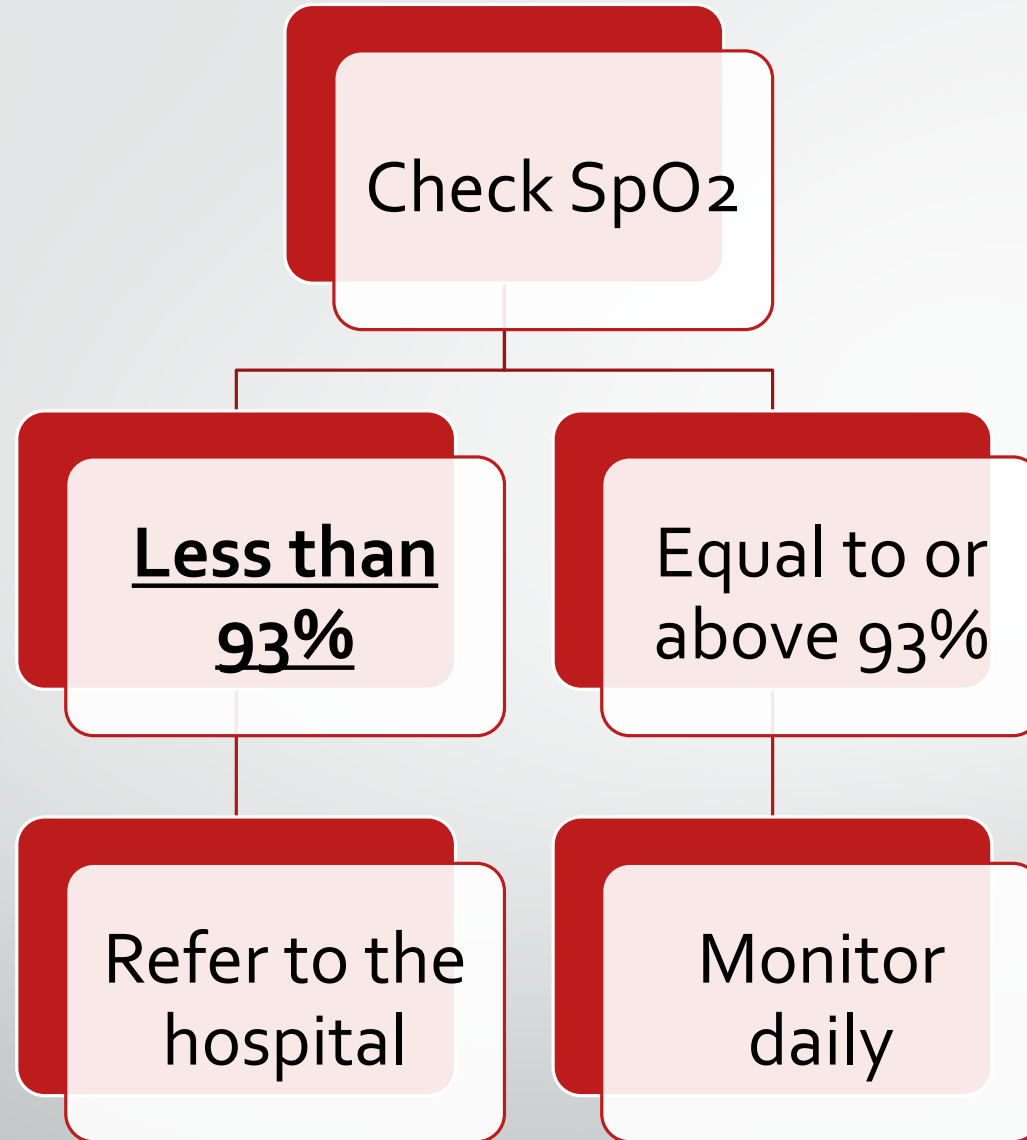
By SpO₂

&

By heart
rate

&

By blood
pressure



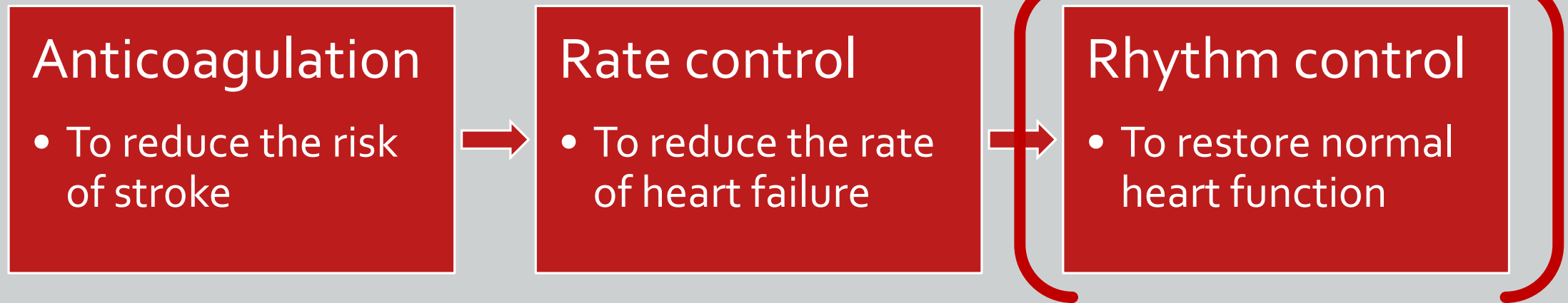
Afib and Shortness of Breath

Afib and Heart Rate

- Patients with heart rate above 110 beats per minute for more than 24 hours should be referred to the hospital

Afib and blood pressure

- Patients with a **blood pressure below 90/50** **OR confusion** should be referred to the hospital immediately.



Treatment for Afib



Treatment for Afib

- Anticoagulation (blood thinners)
 - Warfarin
 - Rivaroxaban
 - Apixaban
 - Dabigatran



How important is anticoagulation?

- Full compliance with anticoagulation can **reduce the risk of stroke by 64%**

Side effects

- Anticoagulants cause easy bleeding:
 - Bloody stools
 - Black stools
 - Vomiting blood
 - Nose bleed
 - Easy bruising
 - Easily have brain bleeds if they fall with head strike



Treatment for Afib

- Rate control
 - Metoprolol
 - Atenolol
 - Carvedilol
 - Diltiazem
 - Verapamil

Side effects

- Rate Control medications cause slow heart rate:
 - Heart rate less than 60
with
 - Tiredness
 - Shortness of Breath
 - Fainting, dizziness, or lightheadedness



Treatment for Afib

- Rhythm control
 - Tikosyn
 - Sotalol

Side effects

- Rhythm control is not absolutely needed
- Rhythm control medications cause abnormal heart rhythms:
 - Heart rate over 110 or less than 60



Treatment for Afib

- Anticoagulation
 - Warfarin
 - Rivaroxaban
 - Apixaban
 - Dabigatran
- Rate control
 - Metoprolol
 - Atenolol
 - Carvedilol
 - Amiodarone
- Rhythm control
 - Tikosyn
 - Sotalol



5 Times

nts are five times
to suffer a stroke.

Be an advocate!

- If your patient is not on an anticoagulant and a rate control agent, call the provider and ask why.

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