

REDEFINING RISK DISCUSSIONS: ATRIAL FIBRILLATION AND STROKE

For your patients with **atrial fibrillation (AFib)**, the chance of having a **stroke** depends on other risk factors in addition to the AFib. Integration of the **CHA₂DS₂VASc score** into clinical decision making for those with nonvalvular AFib has become second nature for clinicians. However, communicating the risks of AFib and its treatments to patients is far from routine. Optimizing approaches to meaningful risk communication—so that **patients understand prognosis and can participate in risk-based treatment decisions for stroke prevention**—is a critical aspect of AFib care. We present an example case to help illustrate the challenges and opportunities:

A 76-year old woman with a long-standing history of hypertension comes to see you. She has been having some intermittent palpitations, but otherwise has been doing well, remains active and independent, with stable exercise tolerance. She has limited past medical history other than some arthritis (for which she takes NSAIDs and acetaminophen) and a prior bout of lower GI bleeding from diverticulosis.

You obtain an ECG and she is in atrial fibrillation with a ventricular rate of 75 bpm.

You calculate her CHA₂DS₂VASc score = 3:

- estimated annual stroke risk ~3.2%
- (stroke/TIA/systemic embolism ~4.6%).

“Over the course of the next year, if we followed 100 people like you, about 3 of them would have a stroke due to clot in the heart breaking free and traveling to the brain.”

Your patient does have diverticulosis and had a prior GIB.

ATRIA bleeding score = 4:

- estimated annual bleeding risk ~2.6% (intermediate).

“Over the course of the next year, if we followed those same 100 people like you, about 2 to 3 of them would end up having a bleeding event needing medical attention.”

Key Challenges

Talking about stroke prevention in AFib is difficult:

1. Patients with a new diagnosis of atrial fibrillation have at least TWO major treatment decisions to make.
 - (A) Stroke prevention
 - (B) Rate control versus various rhythm control strategies
 - Recognizing that there are many issues to address, but then focusing on the highest-priority shared decision during an encounter may be helpful.
2. Stroke can be a devastating health event, but stroke manifestations and severity vary greatly.
 - What does it look like if a patient suffers a stroke from AFib? We recommend trying to portray a range of possible outcomes. A collection of videos from diverse patients with diverse experiences captured in a decision aid can help. Explain what their life might look like after having a disabling embolic stroke.
3. Bleeding similarly comes in different forms and severity, and each approach to stroke prevention affects bleeding risk differently. Patients who have experienced neither a bleed nor a stroke may struggle to “weigh” these competing risks.
 - Bleeding scores (e.g. ATRIA, HAS-BLED) are not as commonly used as the CHA₂DS₂VASc score. If a patient is a candidate for anticoagulation versus LAAO, a bleeding score may be particularly helpful.
4. Risk scores are population-based summaries.
 - How do I consider risk in my patients who don’t look like the cohort from which a score was derived? Probabilities are crude estimates that merely calibrate risk. Recognizing uncertainty is part of a good risk discussion. Say that scores give a “ballpark” guess to help get across the main “gist” of the decision.

MAKING RISK MEANINGFUL

How can the care team enhance discussions about risk to help the patient understand and feel part of the process and that they can do something to reduce risk?

- You are likely to **recommend** some approach to stroke risk reduction (rather than no treatment).
 - If your patient declined any therapy, you may use a **behavioral counseling** approach, starting with “Most, but not all, people in your situation would choose to do something to reduce their risk of stroke. Although treatment has burdens—including costs and side effects, such as increased bleeding—the likelihood of preventing a serious stroke usually outweighs these burdens and risks.
- Recommended treatment **options should be explicitly laid out side-by-side**, and here include:
 - Warfarin and monitoring
 - Direct oral anticoagulant (DOAC)
 - Left atrial appendage occlusion device (LAAO – WATCHMAN)
 - No treatment
- “Best” treatment depends on many individual factors:
 - Concern about the certainty of data: i.e. the estimate of treatment benefits and risks are more clear for DOACs than for LAAO, based on more patient trial data.
 - Concern about bleeding as a side effect.
 - Concern about a single procedure versus daily medication taking.
 - Concern about out-of-pocket costs, which are different short-term versus long-term for each treatment.
 - Concern about blood draws and dietary restrictions for warfarin.
- These individual factors are different for different patients, even within patients who have the same stroke and bleeding scores.
 - Ask patients what matters to them and learn preferences.
 - Recognize that there is an emotional component to risk discussions.
 - Try to gauge their understanding of their personal risk for stroke, especially with a decision of no treatment.
 - Attempt to relate to similar prior experiences that may have relevance.

To help with risk communication and shared decision making, there are **tools** to help: <https://www.cardiosmart.org/SDM/Decision-Aids/Find-Decision-Aids/Atrial-Fibrillation>

Patient decision aids only support a discussion; they are not a replacement for a dynamic interaction with your patients about AF stroke prevention. Here we talk about considerations and techniques that may help you have great conversations with your patients about AF risk and risk reduction.





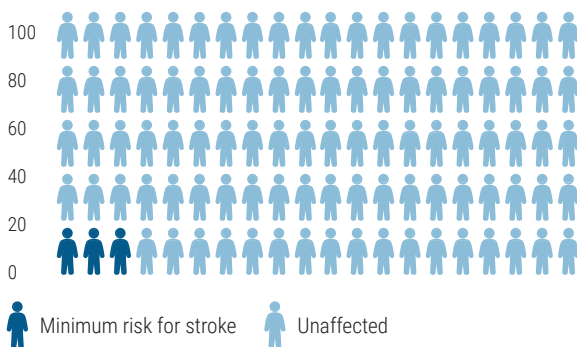
MAKING RISK MEANINGFUL

Patient decision aids can help present some of these tradeoffs in visual ways that support the discussion. An example is below.

STROKE RISK PER YEAR

Without Treatment

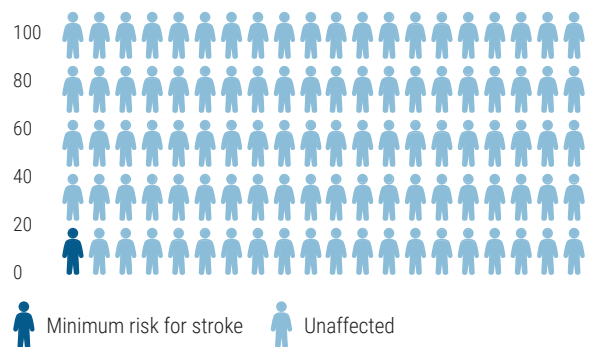
Each year, between **3 to 15 out of 100** people like you (depending on your exact risk factors) will have a stroke.



Your stroke risk is at least **3 out of 100 per year**, but may be higher and likely will increase over time. This is your stroke risk per year, which means this risk goes up with time. Compared to most people without AFib, this is a high risk of stroke.

With Treatment

Each year, between **1 to 4 out of 100** people like you (depending on your exact risk factors) will have a stroke.



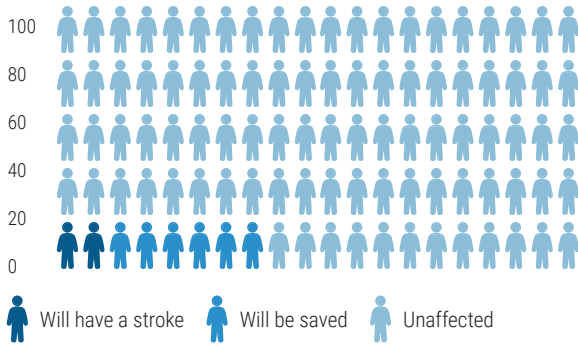
Doing something for stroke prevention is almost **always recommended** by clinicians and usually work the potential risks.



STROKE RISK

Blood Thinners

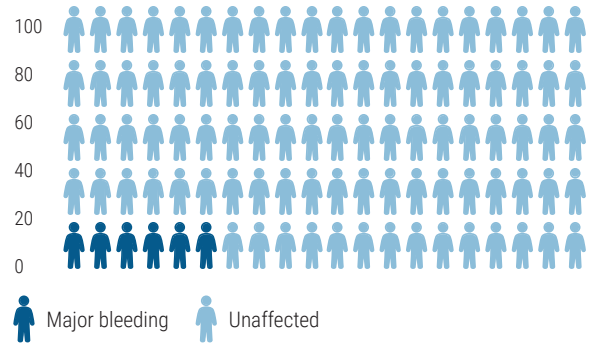
Each year, out of 100 people like you who take **blood thinners**, about 2 will have a stroke and 6 will be saved from a stroke.



OTHER RISK

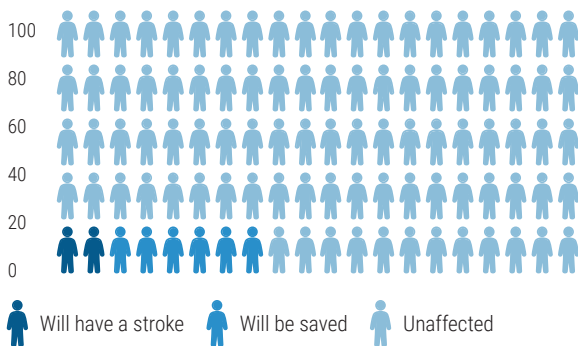
Blood Thinners

Each year, out of 100 people like you who take **blood thinners**, about 6 will have major bleeding.



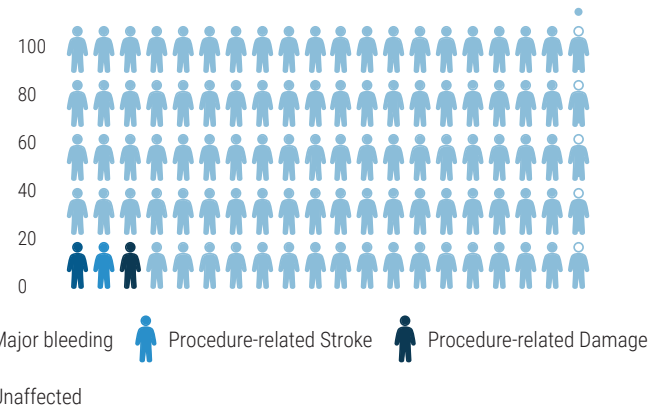
Closure Device

Each year, out of 100 people like you who get a **closure device**, about 2 will have a stroke and 6 will be saved from a stroke.



Closure Device

Each Year, out of 100 people like you who get a **closure device**, about 1 will have major bleeding, 1 will have a procedure-related stroke, and 1 will have procedure-related damage to the heart.



What We Don't Know

Since the closure device is a new treatment, we have less understanding of how well it works to prevent stroke and the long term side effects.

- **Stroke Risk:** Studies show that the closure device reduces strokes in people with AFib about the same as blood thinners. However, the exact benefit is less certain.
- **Bleeding Risk:** Studies on the closure device have only compared its effectiveness to the warfarin blood thinner. Therefore, we do not know how it compares to the newer DOACs, which appear to have a lower bleeding risk than warfarin.

- **Procedure Risks:** The procedure risks of the device are different from center to center. The risks are improving and occur less among doctors who have done the procedure many times.
- **Long Term Risks:** We have less understanding of the long term risks and side effects of the device or what living with the device looks like over several years.

Core Essentials for Effective Risk Communications about Atrial Fibrillation Stroke Risk and Risk Reduction

1. Calculate a CHA₂DS₂VASc score for your patient with AF.
2. Based on the score, categorize your patient into a risk profile.
 - Low = 0: No stroke treatment needed. Give reassurance, with reminder that stroke risk may increase in the future. Discussion shifts to symptoms and rate versus rhythm control, which also involve complex shared decision making...
 - Moderate = 1: No treatment versus blood thinner.
 - High = 2 or more: Recommend some stroke prevention strategy. Calculate a bleeding score (e.g. ATRIA, HAS-BLED), and if that is intermediate to high, then consider LAAO in the treatment option algorithm.
3. Have patients go through the ACC AF Stroke Prevention decision aid.
<https://www.cardiosmart.org/SDM/Decision-Aids/Find-Decision-Aids/Atrial-Fibrillation>
4. Engage patients on how changes in values prioritization can alter treatment decisions. Patients with the same high stroke CHA₂DS₂VASc of 3 and intermediate bleeding risk may come to different treatment decisions:
 - A patient who fears stroke and wants strongest assurance of stroke prevention, takes many medications each day and doesn't mind another -> DOAC?
 - Highly active patient (e.g. skiing, mountain biking) concerned about bleeding risks, ok with a one-time procedure -> LAAO?
 - Patient concerned about out-of-pocket medication costs, doesn't mind getting blood draws (which are covered by insurance), highly adherent -> warfarin?