

## Curbing the Atrial Fibrillation Epidemic Using the A-Fib Clinic Model

By Lorraine Buck

Atrial fibrillation (A-Fib) remains the most common cardiac dysrhythmia seen in clinical practice today, estimated to affect about 2 to 3 million Americans. The prevalence by 2050 is projected to be 15.9 million, with greater than half of those suffering being 80 years of age or older. Moreover, A-fib is not only its own risk factor for mortality, but it also has a significant association of morbidity. Any increase in the incidence of A-fib will also increase the number of patients affected by stroke and heart failure. In fact, A-fib worsens the outcome of heart failure by nearly 3%, while increasing the risk of stroke 1.5% in ages 50-59 and 23% in those older than 80 years of age. The most serious morbidity is from thromboembolic stroke which can cause severe debilitation<sup>1</sup>.

The total cost of A-Fib in 2017, in the United States was estimated to be \$6 billion with most attributed to hospitalizations. In particular, patients with A-Fib that had a stroke accounted for \$2.6 billion<sup>1</sup>. In reviewing treatment of these patients, 30-50% of those eligible A-Fib patients were found to receive no preventive anticoagulation; among those who did, 52% were outside the optimal range<sup>1</sup>. If just half of these patients were controlled with preventative therapy, such as warfarin, about 19,000 strokes could have been prevented, with a savings of approximately \$1.1 billion in overall healthcare costs<sup>1</sup>. In general, hospital costs related to A-Fib patients is also higher due to the frequency of readmission. Nearly 1 out of 8 patients are readmitted within the first year after their index hospitalization (Figure 1).

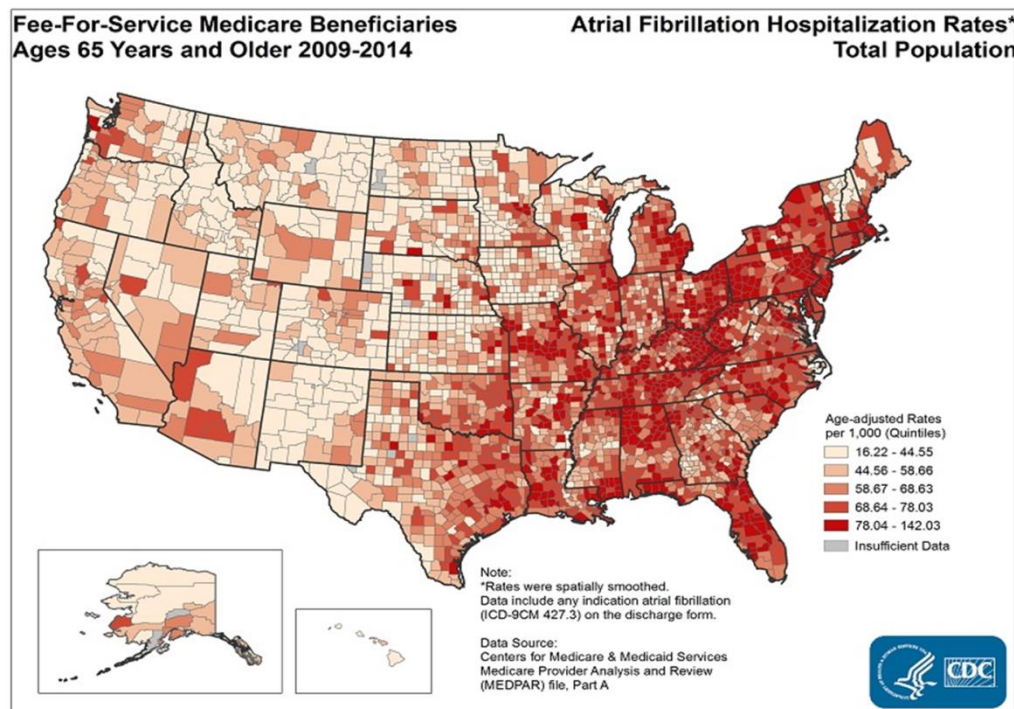


Figure 1: Chart demonstrating 2009-2014 AF hospitalization rates: total population.<sup>3</sup>

Given these current statistics and grim future ahead for this condition, hospitals need to consider strategies for this large and growing population, especially given the impact these patients have on the clinical, operational, and financial aspects of a cardiovascular service line. Indeed,

this sub-specialty is oftentimes 'lost' among the larger or more profitable elements of CV; however, there are opportunities to capitalize on treatment for this condition, while delivering much needed care to patients affected.

## How can hospitals begin to address the A-Fib Epidemic?

There is evidence that hospitalizations due to A-Fib can be avoided by shifting services from the inpatient to outpatient setting. Data from the Healthcare Cost and Utilization Project indicate that 60% of hospital admissions for a principal diagnosis of A-Fib come from emergency room visits<sup>1</sup>. To decrease admissions (and Readmissions) for A-Fib, some hospitals have chosen to implement evidenced-based practice guidelines that incorporate rate control with medications, emergent cardioversions, and patient referral to a dedicated A-Fib clinic, thus avoiding unnecessary admission for this condition. This clinical plan of care has provided a more effective and efficient way of delivering care for patients presenting to the emergency room, which reduces costly hospitalizations and eliminates some of the resources required for inpatient treatment.

## Why Develop an A-Fib Clinic?

Corazon recommends a dedicated A-Fib clinic as a means to provide a comprehensive and personalized approach to evaluation and management of patients with A-Fib. A thorough risk assessment, combined with various treatment options, can reduce A-Fib related to stroke, as well as provide treatment options for rhythm management due to electrical abnormalities.

At their best, A-Fib clinics bring together a multi-disciplinary group of physicians in order to provide the best care for patients, which, depending on the hospital, can include general cardiologists, electrophysiologists, interventional cardiologists, and cardiothoracic surgeons. With the right mix of physicians and technology, centers can offer radiofrequency and cryo-balloon ablation, along with surgical maze for rhythm management of A-Fib. Percutaneous left atrial appendage closure (LAAC) can be used to reduce stroke risk as an alternative to anti-coagulation. To begin the process of developing an A-Fib Clinic, Corazon recommends identifying a physician lead that can facilitate discussions amongst all sub specialists and primary care physicians. Understanding the points of entry into the healthcare system is important, i.e., emergency room, urgent care, or primary care office as this will help to identify algorithms, protocols, and screening mechanisms that need to be developed. Once implemented, patients can be segregated into the appropriate treatment categories for follow-up.

A-Fib categories consist of the following:

- *Paroxysmal A-Fib*: Intermittent with episodes that last <48 hours and that stop without antiarrhythmic therapy;
- *Persistent A-Fib*: last for >1 week if untreated with antiarrhythmic therapy;
- *Longstanding Persistent*: last >12 months duration;
- *Permanent A-Fib*: is no longer corrected with antiarrhythmic therapy.

Treatment of A-Fib focuses on rate and rhythm control with prevention of stroke using oral anticoagulation therapy. This, however, only covers those individuals for whom a diagnosis of A-Fib has already been made. Many patients have persistent A-Fib without symptoms and therefore, may present initially with a stroke. This under-detection of A-Fib represents a major gap in the identification of those with persistent A-Fib. The National Institute for Health and Care Excellence (NICE) suggest opportunistic case finding, rather than a screening strategy. This type of screening can start in the primary care office.

Corazon believes that A-Fib clinics, working together with the primary care base, can be used to support screening for early detection and provide the basis for a continuum of care model (Figure 2). Screening for A-Fib using opportunistic pulse palpation and confirmatory 12-Lead electrocardiogram (ECG) in those with an irregular pulse has been recommended as an intervention to improve the detection of this arrhythmia. Most primary care practices feel quite confident in the ability to detect pulse irregularities as well as interpretation of 12-Lead ECGs. For those practitioners that are not comfortable in the ECG interpretation, referral to a specialist should occur.

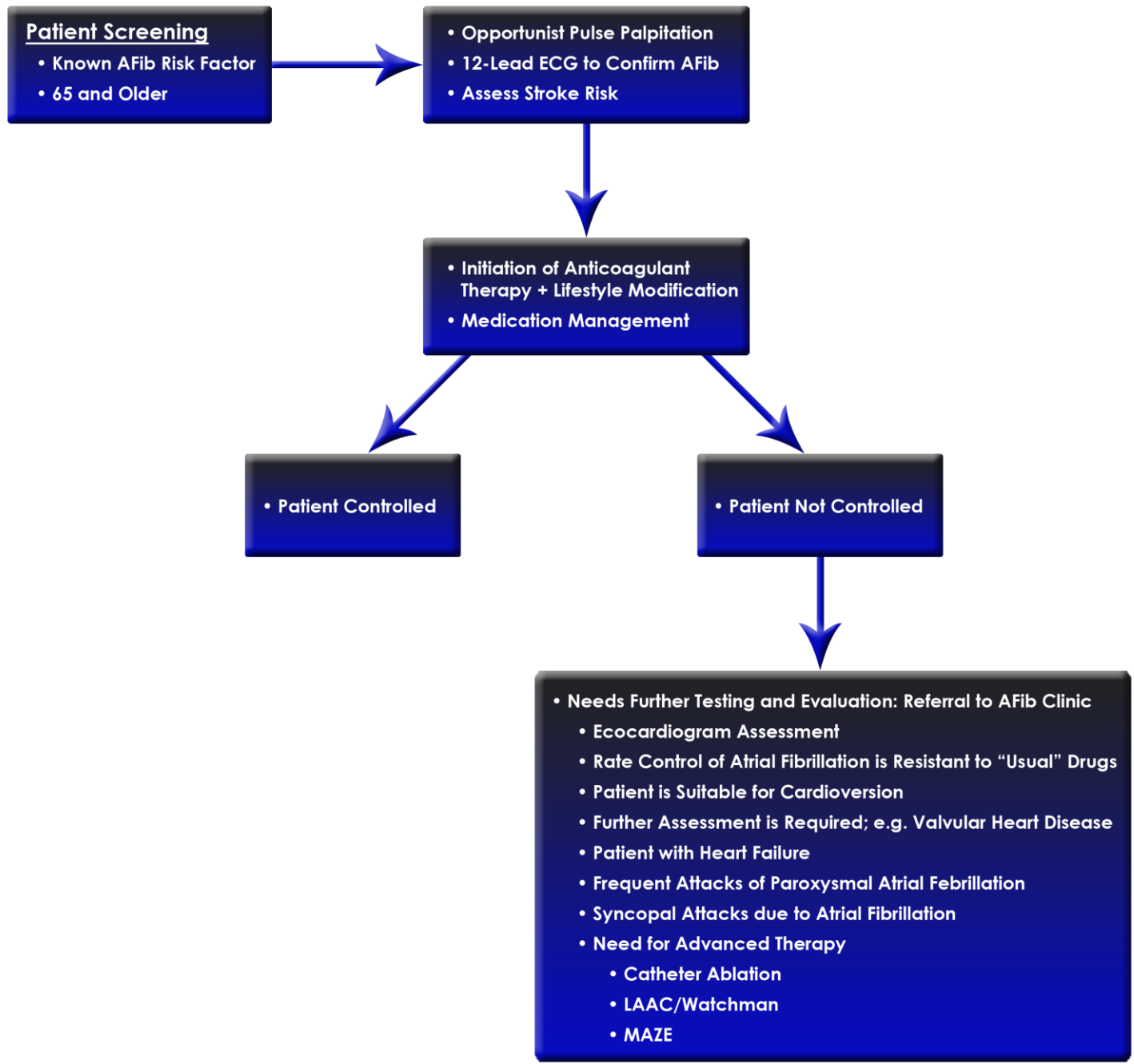
Once A-Fib is identified, Corazon advises clients to establish a care pathway that incorporates both the pharmaceutical and medical management in addition to possible referrals for further testing and evaluation from specialists as needed. Patients in the early stages of the diagnosis and management of A-Fib should first be seen by a cardiologist who would continue to work along with the primary care provider. For those needing advanced or complex evaluation, we suggest evaluation and discussion with an electrophysiologist. Patients referred to an A-Fib clinic may only require a one-time consultation, while others may need further treatment and follow-up care. Despite the path followed, specialists must work closely with the primary care providers to assure complete and correct treatment and ongoing management of the condition.

## Summary

The prevalence of A-Fib in the United States is likely to continue to increase significantly, especially with the aging population and improved survival rates of those with all types of cardiovascular disease. This condition will continue to significantly challenge the healthcare industry due to the high costs and resource utilization associated with care.

With the implementation of new treatment and screening protocols as outlined above, these patients should be able to be identified and placed into the appropriate treatment plans and protocols in order to not only reduce hospitalizations but also to provide the best care. Only then will hospitals realize lower overall costs with improved care and better patient outcomes.

**Figure 2:** An example of a clear care pathway created for A-Fib patients that begins in the primary care physician office.



**References:**

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