

# PHYSICIAN'S WEEKLY UPDATES

**HEART RHYTHM**

Psychological  
**Distress**

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**Cardiac  
Rhythm  
Abnormalities**

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Predicting  
**AFib**



# Devices for Cardiac Rhythm Abnormalities: A Guideline Update

*Updated guidelines for using device-based therapies in treating heart rhythm disorders have been released, emphasizing expanded indications for cardiac resynchronization therapy.*



According to recent estimates, about 400,000 pacemakers and implantable cardioverter defibrillators (ICDs) are surgically implanted each year in the United States. In 2008, the American College of Cardiology Foundation (ACCF), American Heart Association (AHA), and the Heart Rhythm Society (HRS) released guidelines for using device therapy to manage cardiac rhythm abnormalities.



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Since the release of the 2008 guidelines, many clinical research advances relating to device-based therapies have emerged, says Andrew E. Epstein, MD, FAHA, FACC, FHRS. “In an effort to help clinicians keep pace with these advances, the ACCF, AHA, and HRS jointly released updated guidelines in 2012 for the use of device-based therapy in treating heart rhythm disorders. The guidelines can help in clinical decision making in most circumstances.”

The 2012 update writing group included experts in device therapy, cardiovascular care, internal medicine, cardiovascular surgery, and pediatric and adult electrophysiology. The guidelines were also developed in collaboration with the American Association for Thoracic Surgery, Heart Failure Society of America, and Society of Thoracic Surgeons.

## Building on Earlier Cardiac Device Guidelines

For the 2012 update, the writing group began by reviewing the 2008 recommendations. The latter are largely unchanged for standard pacing and ICD indications. However, given new data on cardiac resynchronization therapy (CRT), the 2008 guidelines were updated with CRT as its focus, especially with regard to expanding indications for this treatment (Table 1).

“Despite our improvements in managing patients with device-based therapies, it can still be challenging for physicians to select patients in whom these devices will provide the most benefit,” explains Dr. Epstein, who was vice-chair of the writing committee for the guideline update. “Patients had previously been excluded from receiving CRT, but more recent studies have shown that select individuals who previously were not felt to be candidates for CRT can benefit from the intervention. For these patients, CRT can significantly improve quality and quantity of life by delaying or avoiding worsening heart failure.”

“*CRT can significantly improve quality and quantity of life by delaying or avoiding worsening heart failure.*”

—Andrew E. Epstein, MD, FAHA, FACC, FHRS

## ECG Findings Matter

The guideline writing group has provided clear recommendations about which patients are most likely to benefit from CRT. Patients with mild heart failure or New York Heart Association class II should be considered for CRT based on results from ECGs. “When compared with patients whose ECG findings are normal, those with the most abnormal ECGs can potentially benefit most from CRT,” Dr. Epstein says. “In particular, patients with left bundle-branch block complexes at least 150 milliseconds in duration appear to benefit the most from CRT.”

## The Right Device for the Right Patient

Dr. Epstein notes that it can be difficult for clinicians to assess the likelihood of success with CRT on a case-by-case basis. “Implanting pacemakers and ICDs is usually straight forward, but there is always the potential for complications. The key is to select the right device for the right patient and to monitor them closely after their procedure. This guideline update provides indications for the patients who are most likely to benefit from device therapies based on the best evidence to date.”

2012 DBT Focused Update Recommendations	Level of Evidence	Comments
<b>Class I</b>		
CRT is indicated for patients who have LVEF $\leq$ 35%, sinus rhythm, LBBB with a QRS duration greater than or equal to 150 ms, and NYHA class II, III, or ambulatory IV symptoms on GDMT.	A for NYHA class III/IV; B for NYHA class II	Modified recommendation (specifying CRT in patients with LBBB of $\geq$ 150 ms; expanded to include those with NYHA class II symptoms).
<b>Class IIa</b>		
CRT can be useful for patients who have LVEF $\leq$ 35%, sinus rhythm, LBBB with a QRS duration 120 to 149 ms, and NYHA class II, III, or ambulatory IV symptoms on GDMT.	B	New recommendation.
CRT can be useful for patients who have LVEF $\leq$ 35%, sinus rhythm, a non-LBBB pattern with a QRS duration $\geq$ 150 ms, and NYHA class III/ambulatory class IV symptoms on GDMT.	A	New recommendation.
CRT can be useful in patients with atrial fibrillation and LVEF $\leq$ 35% on GDMT if a) the patient requires ventricular pacing or otherwise meets CRT criteria and b) AV nodal ablation or pharmacologic rate control will allow near 100% ventricular pacing with CRT.	B	Modified recommendation (wording changed to indicate benefit based on ejection fraction rather than NYHA class; level of evidence changed from C to B).
CRT can be useful for patients on GDMT who have LVEF $\leq$ 35% and are undergoing new or replacement device placement with anticipated requirement for significant (>40%) ventricular pacing.	C	Modified recommendation (wording changed to indicate benefit based on ejection fraction and need for pacing rather than NYHA class); class changed from IIb to IIa).
<b>Class IIb</b>		
CRT may be considered for patients who have LVEF $\leq$ 30%, ischemic etiology of heart failure, sinus rhythm, LBBB with a QRS duration of $\geq$ 150 ms, and NYHA class I symptoms on GDMT.	C	New recommendation.
CRT may be considered for patients who have LVEF $\leq$ 35%, sinus rhythm, a non-LBBB pattern with QRS duration 120 to 149 ms, and NYHA class III/ambulatory class IV on GDMT.	B	New recommendation.
CRT may be considered for patients who have LVEF $\leq$ 35%, sinus rhythm, a non-LBBB pattern with a QRS duration $\geq$ 150 ms, and NYHA class II symptoms on GDMT.	B	New recommendation.
<b>Class III: No Benefit</b>		
CRT is not recommended for patients with NYHA class I or II symptoms and non-LBBB pattern with QRS duration <150 ms.	B	New recommendation.
CRT is not indicated for patients whose comorbidities and/or frailty limit survival with good functional capacity to less than 1 year.	C	Modified recommendation (wording changed to include cardiac as well as non-cardiac comorbidities).

Abbreviations: CRT, cardiac resynchronization therapy; DBT, device-based therapy; GDMT, guideline-directed medical therapy; LBBB, left bundle-branch block; LVEF, left ventricular ejection fraction; NYHA, New York Heart Association.

Source: Adapted from Tracy CM, et al. *Circulation*. 2012;126:1784-1800.

**Table 2 Minimum Frequency for Monitoring Patients\***

Type and Frequency	Method
<b>Pacemaker/ICD/CRT</b>	
• Within 72 hours of cardiovascular implantable electronic device implantation	In person
• 2-12 weeks post-implantation	In person
• Every 3-12 months for pacemaker/CRT-Pacemaker	In person or remote
• Every 3-6 months for ICD/CRT-D	In person or remote
• Annually until battery depletion	In person
• Every 1-3 months at signs of battery depletion	In person or remote
<b>Implantable loop recorder</b>	
• Every 1-6 months depending on patient symptoms and indication	In person or remote
<b>Implantable hemodynamic monitor</b>	
• Every 1-6 months depending on indication	In person or remote
• More frequent assessment as clinically indicated	In person or remote

\* More frequent in-person or remote monitoring may be required for all the above devices as clinically indicated.  
Abbreviations: ICD, cardiovascular implantable electronic device; CRT, cardiac resynchronization therapy; CRT-D, cardiac resynchronization therapy defibrillator; CRT-Pacemaker, cardiac resynchronization therapy pacemaker; ICD, implantable cardioverter-defibrillator; DBT, device-based therapy; GDMT, guideline-directed medical therapy; LBBB, left bundle-branch block; LVEF, left ventricular ejection fraction; NYHA, New York Heart Association; Tracy, Cynthia M. Tracy, MD.

Source: Adapted from Tracy CM, et al. *Circulation*. 2012;126:1784-1800.

In addition, the 2012 guidelines provide other modifications to help physicians decide which patients with atrial fibrillation (AF) might benefit from CRT. In particular, CRT can benefit some patients with left ventricular dysfunction and AF. The committee also summarized the minimum frequency of in-person and remote monitoring of patients with cardiovascular implantable electronic devices (Table 2).

## Keeping Up to Date on Guidelines

The 2012 guideline update was published in issues of *Circulation*, the *Journal of the American College*

*of Cardiology*, and the *HeartRhythm Journal*. Dr. Epstein recommends that clinicians refer to these guidelines when managing patients with cardiac rhythm abnormalities. “The updated guidelines extend and clarify current best practices, but will continue to evolve as technology advances,” he says. “More work is currently underway to develop a related ‘Appropriate Use’ document. The hope is that further interpretation of the best science available will enable us to apply the lessons learned in research studies to various clinical scenarios so that we can optimize outcomes in this growing patient population.”

For more information on this article, including the contributor’s financial disclosure information and reference, [click here](#).

## Readings & Resources

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# The Impact of Psychological Distress on AF

**A**trial fibrillation (AF) is the most common arrhythmia in adults and is rapidly reaching epidemic proportions in the United States. Recent studies have suggested that treatment of AF correlates with enhanced overall quality of life. According to current guidelines, the choice of management strategy for AF should be guided by the

symptomatic status of patients due to AF. Despite the emphasis being placed on relief of AF symptoms, several smaller investigations have suggested that psychological distress may be linked with patient-reported AF symptom severity.

Some analyses have shown that patients with AF have a high prevalence of anxiety and depression. It's possible that depression and anxiety may be more important than the number or duration of AF episodes in predicting AF symptom severity. These conditions may also be important predictors of worsened outcomes in patients with AF. Few studies, however, have investigated the association between anxiety and depression and severity of symptoms that patients attribute to AF.



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## Intriguing New Data on Patients with Atrial Fibrillation

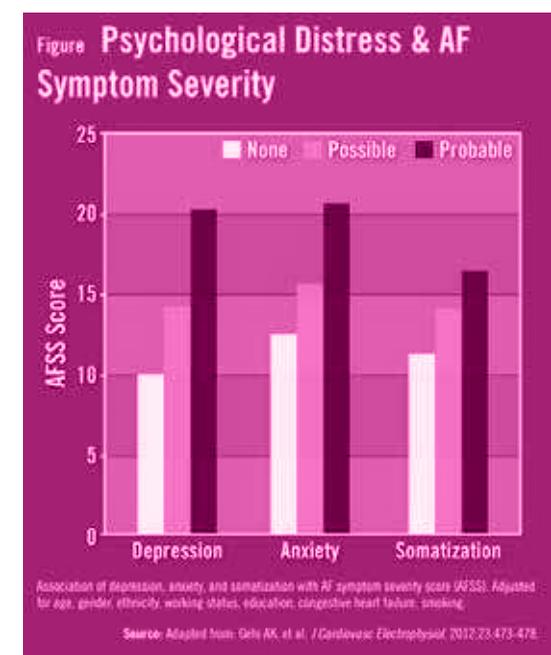
To determine whether psychological distress is an important factor in patient-reported AF symptom severity, my colleagues and I performed a study—published in the *Journal of Cardiovascular Electrophysiology*—that examined the issue in greater detail. A cohort of 300 outpatients with stable AF was screened for symptoms of anxiety, depression, and somatization disorder. They also completed questionnaires that assessed general health and well-being, specifically measuring disease-specific AF symptom severity.

Overall, patients in the study with worsened severity of depression, anxiety, or somatization disorder symptoms had an increase in AF symptom severity regardless of the AF severity scale used (see Figure). In addition, greater severity of depression and anxiety symptoms was associated with more frequent visits to seek medical attention for AF.

## Meaningful Implications on AF Management

The possibility of increased AF burden leading to both increased psychological distress and worsened AF symptom severity needs to be addressed. Anxiety, depression, and other psychological disorders can have important consequences that should be factored into how patients with AF are managed.

Although AF symptom severity appears to be greater in patients with various forms of psychological distress,



the direction of this relationship remains unclear. As we seek to manage the increasing burden of AF, it's important for clinicians to make efforts to break the cycle of worsening symptom severity, psychological distress, and healthcare utilization. It's hoped we'll continue striving to increase our understanding of the influence of psychological well-being on symptom relief and its effects on adherence to treatment recommendations. As more data emerge, assessment of psychological distress may become an important adjunct to standard AF care, particularly in cases for which symptom relief is the primary goal. Studies such as ours highlight the importance of addressing symptom relief in addition to AF recurrence when treating the patient with AF.

For more information on this article, including the contributor's financial disclosure information and reference, [click here](#).

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# Predicting Atrial Fibrillation After CABG

*Postoperative atrial fibrillation (AF) occurs in 15% to 30% of patients who undergo isolated CABG. A simplified clinical tool using preoperative patient characteristics may help to identify those at high risk.*

Postoperative atrial fibrillation (AF) occurs in 15% to 30% of patients who undergo isolated CABG. Patients who develop AF after these procedures are at risk for longer hospital stay, perioperative morbidity and mortality, and long-term mortality. Identifying specific patients who are at high risk for developing AF after CABG may help define a population that is more likely to benefit from anti-arrhythmic drugs or other AF prevention strategies.

## Evaluating a Simple AF Risk Model

Previous analyses of patients undergoing CABG have suggested that certain preoperative, intraoperative,



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and postoperative factors can be used to determine the risk of postoperative AF (POAF), but these models can be cumbersome to apply and may not always be useful. In the American Journal of Cardiology, my colleagues and I had a study published that tested a simplified clinical tool using preoperative patient characteristics to identify those at high risk for POAF following CABG.

Using the Society of Thoracic Surgery database, we identified a subset of preoperative variables that predispose patients to POAF. Using these variables, we created a risk index that had a moderate prediction power to identify patients at high risk of developing POAF. Patients were assigned point values according to the AF Risk Index Table. Patients scoring 4 points on the AF risk index had a 30% to 40% chance of developing POAF. Conversely, those with a score of 0 points had a less than 10% risk.

Advanced age was the only factor that consistently predicted the occurrence of POAF in CABG patients. The



effects of increased weight and height and the presence of peripheral vascular disease (PVD) on AF risk have been previously reported, and our study supports that these factors contribute to higher risk of developing POAF. PVD, in particular, may signal the severity of illness and the presence of multiple comorbidities that predispose CABG patients to POAF.

noted that our model is only applicable to patients undergoing CABG. Studies need to establish if this AF risk index is applicable to patients receiving valve surgery. Prospective analyses using the risk index may further validate it as a useful tool in clinical practice. If validated, we may ultimately be able to better identify and manage high-risk patients with preventive interventions. 

## Implications For Patients Undergoing CABG

The prediction model in our study is simple to implement and can be used universally because the information needed to calculate risk scores is readily available. If patients undergoing CABG score 3 or 4 points using our model, it may behoove physicians to provide patients with anti-arrhythmic drugs or other interventions to prevent AF. That said, it should be

Table: AF Risk Index

Variable	Men	Women
Age	>60 years = 1 point	>66 years = 1 point
Weight	>76 kg = 1 point	>64 kg = 1 point
Height	>176 cm = 1 point	>168 cm = 1 point
Peripheral vascular disease (PVD)	Present = 1 point	Present = 1 point

Source: Adapted from: El-Chami MF, et al. *Am J Cardiol*. 2012;110:649-654.

For more information on this article, including the contributor's financial disclosure information and reference, [click here](#).

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# Managing Psychosocial Distress in ICD Recipients

*New guidelines have been created to improve the precision of identifying and caring for psychosocial distress in implantable cardioverter defibrillator (ICD) patients.*



Implantable cardioverter defibrillators (ICDs) have been shown to prevent life-threatening ventricular arrhythmias, but recipients can sometimes have dramatic experiences resulting from care. Each month, about 10,000 Americans have ICDs implanted to restore normal heart rhythm and prevent sudden cardiac death. “Many people who experience cardiac

arrhythmias are surprised to learn of their potentially life-threatening condition,” explains Sandra B. Dunbar, RN, DSN, FAAN, FAHA. “Patients and their family are often forced into critical medical decision making and required to confront and cope with their condition. They need to be educated on their treatment options and adjust to the fact that they need an ICD.”

Studies have shown that ICDs can significantly improve survival and quality of life (QOL), but the underlying arrhythmia and its treatment may be accompanied by adverse psychological responses. “These responses may be underappreciated in some cases and warrant greater attention by healthcare providers,” says

Dunbar. “Focusing on ways to optimize psychological outcomes for those who are considering or receiving an ICD is paramount.” Psychological outcomes are an important component of QOL and reflect an aspect of the costs and benefits beyond simply living longer.”

In an issue of *Circulation*, Dunbar and colleagues at the American Heart Association (AHA) had a scientific statement published that provides an evidence-based comprehensive review of psychosocial considerations and QOL for people who receive ICDs. The statement also describes the concerns and educational needs of ICD patients and their families and outlines evidence supporting interventions for improving educational and psychological outcomes

for these patients. Recommendations for improving psychosocial outcomes are also provided so that the benefits of using ICDs can be maximized (Table).

## Education & Support for ICD Recipients

Dunbar, who chaired the AHA committee that developed the scientific statement, says that education and support for ICD recipients must include patients and their families and be broader than simply focusing on maintaining the device. “Depression, anxiety, and PTSD are common among people with ICDs, so routine screening and appropriate treatment for these conditions are recommended.”



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The statement adds that doctors and nurses should provide gender- and age-specific information on the potential psychological impact. Helping patients address ICD-specific concerns about symptoms, heart disease treatment, physical activities, and end-of-life issues is also key. The AHA notes that clinicians should provide clear information about the benefits and limitations of ICDs before implanting them. The patient's prognosis and the impact of receiving ICDs on lifestyle should also be clearly explained.

## Follow-Up & Monitoring of ICD Recipients

Close monitoring and follow-up are important components to optimizing psychological outcomes among ICD recipients, according to Dunbar. "At each follow-up visit, we should be assessing patient

*“Focusing on ways to optimize psychological outcomes for those who are considering or receiving an ICD is paramount.”*

concerns and psychological status. Extra efforts may be required to help patients and their families deal with the stressful situations that may develop as a result of getting an ICD.”

When patients experience an ICD shock, the event can be distressing. "Patients can have a wide variety of responses to shocks," Dunbar says. "While some are reassured because they recognize that the ICD is working, others find the physical sensations frightening and overwhelming. To improve psychological

outcomes, physicians and nurses should work with patients and their families to develop a clear shock plan so they know what to do in the event of a shock." The AHA also recommends that clinicians provide an ongoing assessment of ICD patients' psychological needs.

ICD patients can expect generally desirable QOL as long as they are not exposed to excessive, unnecessary, or repeated ICD shocks, according to the AHA statement. "Most ICD patients derive other

benefits in addition to the mortality benefit without compromising QOL," says Dunbar. The underlying cardiac disease, associated symptoms, and physical limitations caused by heart failure are other important considerations in QOL outcomes.

## More to Come on ICD Use

Dunbar says that more study is needed on the pathways that link psychosocial distress and ventricular arrhythmias to ICD shocks. "Finding ways to predict which patients are likely to experience psychological distress and how to alleviate it is important in future research. We also need to learn more about the most appropriate levels of physical activity for children and teenagers with ICDs. Another area that requires more study is when and how to discuss potential ICD deactivation near the end of life. As clinicians become more cognizant of the need for providing greater psychosocial support in the various stages of ICD implantation, it's hoped that patients who need these devices and their families will experience benefits in psychological outcomes." 

For more information on this article, including the contributor's financial disclosure information and reference, [click here](#).

## Readings & Resources

**Dunbar SB, Dougherty CM, Sears SF, et al.** on behalf of the American Heart Association Council on Cardiovascular Nursing, Council on Clinical Cardiology, and Council on Cardiovascular Disease in the Young. Educational and psychological interventions to improve outcomes for recipients of implantable cardioverter defibrillators and their families: a scientific statement from the American Heart Association. *Circulation*. 2012;126:2146-2172. Available at: <http://circ.ahajournals.org/content/early/2012/09/24/CIR.0b013e31825d59fd.full.pdf+html>.

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**Table Recommendations for Improving Psychological Outcomes in ICD Patients**

### Pre-implantation

Provide the ICD recipient and family member direct discussion about ICD benefits, limitations, general prognosis, expected trajectory of illness, battery longevity and device replacement, and modes of death in end-stage HF, if appropriate.

Emphasize the protective value of the ICD against SCA but not the underlying cardiac condition separate from biventricular pacing or other functions of the device, if present.

Encourage expression of patient and family preferences for therapies by weighing QOL and survival.

Review the expected impact of the ICD on usual activities, including driving, travel, sexual and physical activity, and length of time for restrictions, if any.

Provide information to address the specific concerns of women.

Provide age-specific, developmentally appropriate patient education about the device and the underlying disease, taking into account children's understanding of illness and the age and developmental level of the child.

Ask children and parents to share their thoughts and feelings regarding device placement.

### Post-implantation, early recovery, adjustment

Provide instructions on wound care, medications, and pain and symptom management, and address concerns before hospital discharge.

Tailor information for age, sex, literacy, and comorbidities.

Reinforce pre-implantation information on return to physical activity, work, travel, and sexual activities.

Provide a clear and succinct shock plan for what the patient and family are expected to do in the event of a shock.

Provide information to reduce assessed or expressed concerns related to body image, fear of shocks, and financial issues.

Assess ICD concerns and psychological status at follow-up visits.

Encourage patients and partners/family members to discuss the impact of the ICD and illness in their lives, as well as management approaches.

Provide reinforced and updated information after a routine battery/device replacement.

Promote problem solving, access to information, and ways to seek social support as problem-focused coping strategies. Consider structured support groups that focus on providing information and positive coping skills.

Provide access to information through web resources if appropriate.

Adapt shock plan information to the developmental needs of children.

Promote psychosocial resiliency in young people with ICDs by identifying psychosocial vulnerabilities early; be open, honest, and age-appropriate.

Provide information to parents; give parents advice about follow-up procedures, return to school, and activities.

### ICD events

Prevent shocks for ventricular arrhythmias with individual and specific drug therapy, ablation procedures, and for pediatric patients, patient-specific programming of tachycardia detection criteria and termination algorithms.

Discuss the meaning of shocks with patients when they occur.

Reduce the number of inappropriate shocks in pediatric ICD recipients by optimizing the programmable parameters of the device, including advanced detection criteria; tailor sinus rate setting based on exercise stress testing.

Hold face-to-face discussions when possible with the patient and his or her family regarding the specifics of any advisory or recall.

Promote informed decisions by including all potential implications of replacement, such as medical, psychosocial, and burden-of-cost issues, in the discussion.

Refer to a mental health provider if indicated.

### End of life

Review patient and family understanding of their disease, goals of care, and desired outcomes, as well as the relationship of the ICD to those stated goals.

Discuss the potential to deactivate the shocking component of the ICD.

Consider enhanced symptom management and palliative care.

Respect the right of the patient to request inactivation, right of the clinician to refuse inactivation, and right of the patient to request a clinician who will inactivate.

Abbreviations: ICD, implantable cardioverter defibrillator; HF, heart failure; SCA, sudden cardiac arrest; QOL, quality of life.

Source: Adapted from: Dunbar SB, et al. *Circulation*. 2012;126:2146-2172.

# Managing Recent-Onset Atrial Fibrillation in the ED

*Taking an aggressive approach to ED patients with presumed recent-onset atrial fibrillation or flutter appears to be safe and effective, leading to high rates of cardioversion and discharges to home with low adverse event rates.*

Atrial fibrillation (AF) is the most common sustained cardiac rhythm disturbance. AF is a risk factor for ischemic stroke and heart failure, both of which represent significant public health problems. With an increasing prevalence among an aging population, symptomatic AF-related ED visits have been rising and will likely continue to rise.

Traditionally, ED patients thought to have recent-onset AF have been hospitalized for monitoring and

evaluation of more serious conditions. More recently, clinicians have been utilizing a more aggressive approach in which stable ED patients with presumed recent-onset AF are treated with elective cardioversion without anticoagulation. While previous reports suggest that this approach is associated with a high rate of cardioversion to sinus rhythm and a low rate of hospitalization and complications, there is no consensus on whether it is better than traditional approaches.

## Seeking Confirmation on Recent-Onset AF Treatment

In the *Journal of Emergency Medicine*, David R. Vinson, MD, and colleagues published a prospective multicenter study that describes the management of ED patients with presumed recent-onset AF. "It had been our anecdotal experience at three

affiliated community EDs that taking an aggressive cardioversion approach to managing patients with recent-onset AF was effective and associated with few complications," says Dr. Vinson. "In this study, we put our practice patterns under critical scrutiny to confirm the safety and effectiveness of ED cardioversion and to accurately measure the incidence of thromboembolism 30 days after discharge."

Dr. Vinson and colleagues analyzed 206 patients with recent-onset AF. A majority of these (115) were deemed eligible for cardioversion, via parenteral medications or the application of direct current. While the electrical route was more effective at restoring sinus rhythm (96% vs 60%), it required procedural sedation. As a result, the pharmacologic approach was a little safer, according to Dr. Vinson. When one method was found to be unsuccessful in

a patient, the other was often utilized in a two-step approach.

## Important Results on Cardioversion

Overall, 88.8% of patients in the investigation were discharged home. Adverse events that required ED intervention occurred in only 2.9% of patients, all of whom recovered. Spontaneous conversion to normal sinus rhythm in the ED was observed in 28.6% of the 206-patient cohort. Attempted cardioversion was carried out in 56.3% of patients. "In this population, more than 95% of patients achieved conversion, most of whom went home from the ED," notes Dr. Vinson. "The restoration of sinus rhythm has many advantages. It alleviates their symptoms, reduces their stroke risk, and decreases the need for hospitalization."



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“Clinicians who are already practicing a more aggressive approach to restoring sinus rhythm can be reassured by the safety and efficacy that was observed in our study.”

Among those in whom cardioversion was contraindicated, most received intravenous rate reduction medications and were discharged home on rate-control drugs and anticoagulation with arranged timely follow-up. Short-term home observation with urgent follow-up was used in 7.8% of patients, all of whom presented early in their symptom course. “A sizeable proportion of patients with recent-onset AF will spontaneously cardiovert within 48 hours,” Dr. Vinson explains. “Among those who were prescribed short-term home observation, 68.8% spontaneously converted. If they remained in AF, we were still within the 48-hour window and could consider pursuing cardioversion if indicated.”

The most important safety outcome from the study, according to Dr. Vinson, came from 100% patient follow-up of the entire cohort. “At 30 days after discharge, just two of the 206 patients were found to have developed a thromboembolic event,” he notes. “Only one of these had undergone ED cardioversion. This shows that ED cardioversion does not appear to increase patients’ risk for post-cardioversion strokes.” Although the results are promising, Dr. Vinson warns that not all patients

with recent-onset AF in the ED are good candidates for cardioversion. “Physicians should assess a patient’s underlying cardiac function, particularly structural abnormalities, and their overall risk for stroke,” he says. “Younger, healthier patients with anatomically normal hearts are the best candidates for this approach.”

## Investigating Broader Population of AF Patients

Dr. Vinson and colleagues are currently undertaking a 2,000-patient, prospective study at nine Kaiser Permanente EDs in three states in an effort to investigate a broader population of patients with AF. “We want to study variations in AF management,” he says. “EDs take different approaches to patient management, so it’s important to see how these variations affect outcomes. In the meantime, clinicians who are already practicing a more aggressive approach to restoring sinus rhythm can be reassured by the safety and efficacy that was observed in our study. Those who practice conventional treatment approaches may want to consider elective cardioversion for select patients with recent-onset AF.” 

For more information on this article, including the contributor’s financial disclosure information and reference, [click here](#).

### Readings & Resources

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