

EP News: Quality Improvement and Outcomes

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In this issue of *Heart Rhythm Journal* we continue this quarterly feature highlighting important developments and advances in quality improvement or systems-based practice improvement in the delivery of heart rhythm care. This issue focuses on quality improvement surrounding atrial fibrillation (AF) and highlights some opportunities for measuring, reporting, and improving the quality of heart rhythm care for AF.

Implications of the LEGACY trial on US atrial fibrillation patients: An NCDR Research to Practice Project

Gehi et al (Am J Cardiol 2017;119:579, PMID 28038724) evaluated how a potential weight reduction program could affect outcomes in patients with AF who undergo catheter ablation in US clinical practice. As part of the research to practice initiative, the authors assessed how many patients in the National Cardiovascular Disease Registry (NCDR) PINNACLE cohort with AF would have been eligible for inclusion in the Long-term Effect of Goal Directed Weight Management in an Atrial Fibrillation Cohort (LEGACY) study (Pathak K, J Am Coll Cardiol 2015;66:985–996). LEGACY demonstrated that weight reduction resulted in a reduction in AF burden and improvement in AF symptom severity. Among 349,999 patients enrolled in the PINNACLE registry from 179 US practices, 197,255 (56%) met the weight reduction program enrollment criteria. Patients who met the criteria for the weight reduction program had a mean age of 69 years; 73% had paroxysmal AF; 85% had hypertension; 26% had diabetes; 23% had heart failure; and the mean body mass index (BMI) was 35. Of note, only 1 in 4 of these patients was receiving an antiarrhythmic medication. Compared with Australian patients enrolled in the LEGACY study, US PINNACLE patients with AF were older, had lower rates of tobacco and alcohol consumption, and had higher BMI. Because US patients had less tobacco and alcohol consumption, the authors hypothesized that a weight loss program might have a greater effect in US patients with AF and obesity undergoing AF ablation. *On the basis of the overall data, the*

authors conclude that there is a significant opportunity to improve outcomes after catheter ablation in more than half of all patients undergoing ablation in the United States. The first step in any quality improvement process is measuring the problem of interest. This study from Gehi et al helps measure the potential effect of weight reduction in patients with AF in the United States undergoing ablation. Future studies should address how systematic weight reduction can be implemented in AF centers, particularly in patients undergoing ablation.

Provider specialty, anticoagulation prescription patterns, and stroke risk in atrial fibrillation

O'Neal et al (J Am Heart Assoc 2018;7:e007943, PMID 29525778) examined differences in oral anticoagulant prescription by provider specialty in patients with AF as a potential area of quality improvement for clinical practice. The MarketScan databases from 2009 to 2014 were used to examine oral anticoagulation prescription fills in 388,045 patients (mean age 68 ± 15 years; 41% women) with incident AF. Provider specialty of the prescriber (cardiology vs primary care) was obtained from outpatient services and pharmacy claims and assigned to anticoagulant prescriptions. Of the cohort, 235,739 patients (61%) received a prescription fill from a cardiology provider vs 152,306 (39%) from primary care provider. Those patients seen by cardiology providers had a higher likelihood of filling oral anticoagulant prescriptions than did patients seen by primary care providers (39% vs 27%; relative risk [RR] 1.39; 95% confidence interval [CI] 1.37–1.40), which was observed in both types of anticoagulants including direct oral anticoagulants (RR 1.74; 95% CI 1.71–1.78) and warfarin (RR 1.24; 95% CI 1.22–1.26). Stroke risk was lower in patients seen by cardiology providers (hazard ratio [HR] 0.90; 95% CI 0.86–0.94) than in patients seen by primary care providers, but bleeding risk was no different (HR 1.03; 95% CI 0.98–1.07). *The authors conclude that AF patients seen by cardiology providers as outpatients were more likely to initiate oral anticoagulant treatment to reduce stroke risk than patients seen by primary care providers. The authors posit that early referral to cardiology may increase the initiation of oral anticoagulant therapy to improve outcomes in patients with AF.*

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