

## Population Health Forums

### New Therapeutic Options for Stroke Prevention in Atrial Fibrillation

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Anti-coagulation therapy for stroke prevention in Atrial Fibrillation (AF) has been dominated by the drug warfarin for more than 50 years, yet three recently approved drugs are viable therapeutic alternatives to warfarin. However, according to Dr. Jackson, Program Director for Applied Health Economics and Outcomes Research at JSPH, they are not without challenges to optimize care for AF patients. He helped provide a clear and insightful overview of this topic at a recent Forum. Dr. Jackson has over 30 years of experience in the pharmaceutical industry, with much of this time devoted to clinical research and the management and practice of Outcomes Research, including the transition of clinical evidence into user-friendly cost-effectiveness models.

The framework for Dr. Jackson's presentation was based on outcomes research, which he described as the "study that studies the studies." The purpose of outcomes research, according to the Agency for Healthcare Research and Quality (AHRQ), is to examine three questions: 1) Do patients benefit? 2) What treatments work best? And, 3) Are health-care resources well spent?

Jackson first cited the incidence of AF by explaining that approximately 15% of all strokes occur in people with AF; the

risk of stroke in patients with untreated AF averages 5% per year and increases with advancing age. Jackson emphasized the chronic and devastating nature of AF and the importance of understanding the efficacy and the effectiveness in the real world of therapeutic options.

For many years, warfarin has been the only oral anti-coagulant available for chronic care. Though hugely successful in terms of stroke prevention, its use presents numerous challenges in everyday practice, particularly for chronically ill, elderly patients. For example, warfarin is known to have many interactions with other drugs and foods, and requires constant monitoring. There is a narrow therapeutic range, and the blood test monitoring of the INR (International Normalized Ratio), can be a significant barrier for certain populations as well as caregivers. Most significant is that warfarin is a leading cause of adverse drug events and associated visits to emergency rooms, Jackson explained.

A new group of anti-coagulants, called "Novel Oral Anticoagulants" or NOAC, including dabigatran, rivaroxiban, and apixaban, open the door for promising alternatives to warfarin, with fewer complexities in the treatment regimens. Dr. Jackson offered an overview of

the major clinical studies, and even indirectly compared some of the findings, after warning the audience about the dangers of indirect comparisons.

Relating this back to outcomes research, Jackson tackled the questions, "what treatment works best?" and "are healthcare resources well spent?" NOACs, he explained, are unique compared to warfarin in that they don't need INR monitoring, but as anti-coagulants they still need careful oversight. In many key outcomes, NOACs were actually superior or better than warfarin; however, until real-world safety and effectiveness are confirmed, their promise of a superior alternative to warfarin remains to be seen. He closed by affirming that most effective therapies prove cost-effective, and for the NOACs real-world scenarios will be crucial to assess their ultimate value.

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Throughout his presentation, Dr. Jackson acknowledged the work and expertise of Geno J. Merli, MD, Co-Director of the Vascular Center at Jefferson, and a national expert on anticoagulant therapy. ■

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