

## **Comparative Effectiveness of Dabigatran and Warfarin for Stroke Prevention in ATR**

Career Award

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### **Background**

This application describes the plan to expand my methodological skills related to patient-centered comparative effectiveness research by investigating outcomes and treatment of atrial fibrillation (AF). Compared to other cardiovascular conditions, research in AF is far less developed. In particular, there is a paucity of studies that have used administrative data to investigate AF treatment and outcomes in contemporary clinical practice. The Institute of Medicine has listed AF as one of the nation's top 25 comparative effectiveness research priorities.

AF occurs when disturbances in cardiac electrical activity causes the heart to pump blood ineffectively, ultimately leading to fatigue, lower quality of life, and lower life expectancy. A particularly serious complication of AF is ischemic stroke. The risk of stroke may be lowered with anticoagulation therapy (e.g., warfarin), although the reduction in stroke risk is often accompanied by an increase in the risk of bleeding. In recent years new anticoagulation medications (dabigatran) have been introduced but the effectiveness of these new medications outside of clinical trials is relatively unknown.

### **Objectives**

In this proposal I describe my plan to develop critical new expertise in patient-centered comparative effectiveness research and apply my skills to investigate the effectiveness of warfarin and dabigatran among Medicare beneficiaries with newly diagnosed AF. I will use a novel qualitative method to assess safety and effectiveness concerns regarding anticoagulation therapy posted by patients and families on internet discussion forums. I will then use administrative data to conduct rigorous statistical inquiry to address the effectiveness and adverse effects associated with anticoagulation by warfarin or dabigatran. I will be mentored by a team of experienced researchers with expertise in four critical areas: qualitative research methods, analysis of pharmacy claims data, adjustment for confounding in observational data, and clinical management of AF.