New study identifies a key role for pharmacists in stroke risk reduction

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According to Dr. Roopinder Sandhu, MD, MPH, atrial fibrillation (Afib) is the most common heart rhythm disorder encountered in clinical practice, and the leading cause of stroke in older individuals. Sandhu, a

cardiac electrophysiologist and the Director of the Women's Cardiovascular Health Initiative at the Cumming School of Medicine, University of Calgary, says despite the availability of blood thinners that are highly effective and safe to reduce the risk of stroke, major gaps in the delivery of appropriate blood thinners persist, leaving a large proportion of individuals at risk for stroke and other complications.

Sandhu has led a study investigating whether involving community pharmacists in the prescription of appropriate blood thinners for individuals with undiagnosed or undertreated Afib could improve stroke prevention. The findings are published in the journal *JAMA Network Open*.

"People visit their pharmacists up to eight times more often than their physicians. Pharmacists have long-term trusted relationships with the people who come to them for medication and advice on the medications they take," says Sandhu, first author and principal investigator. "Also, access to a pharmacist may be easier for many people than access to a family physician, especially for people in remote communities."

The research team worked with pharmacists in 27 communities across Alberta who are specially trained in Afib and prescribing blood thinners. The pharmacists recruited 80 patients over the age of 65 with one additional stroke risk factor such as diabetes, high blood pressure or heart failure, and known, untreated Afib (no blood thinner or suboptimal dose of blood thinner), or performed screening to detect previously undiagnosed Afib.

"We set up heart health stations in participating pharmacies where people could check their blood pressure and heart rhythm using a mobile electrocardiogram (ECG), a digital tool that provides a read out of your heart rhythm. The heart rhythm readings were sent to two cardiologists for analysis," says Miriam Fradette, co-investigator and pharmacist.

"When the cardiologists confirmed an irregular rhythm, the person was booked for another ECG through the health-care system and their doctor was notified."

Study participants were randomized into two groups; one group was identified as the early intervention group and continued consulting with the pharmacist, the other group was advised to speak with their family doctor. After three months, if the second group had not seen their physician, the pharmacist worked with them directly, and kept the physician looped in. Both groups were followed for a year.

"The findings show allowing trained community-based pharmacists to prescribe to this group increased the number of at-risk individuals taking optimal stroke-preventing blood thinners by 34 percent," says Sandhu. "I knew there would be a difference between the groups, but I didn't realize how large it would be. This collaborative care model which leverages the expertise of pharmacists could have far-reaching impact in addressing the large number of people who remain untreated or undertreated for Afib and who are at risk of stroke, particularly since several countries have moved toward pharmacist prescribing independently or through collaborative practice agreements."

Sandhu adds that it is important that an infrastructure exists where pharmacists can perform patient assessments; order and interpret labs; initiate, adjust, and monitor drug therapy; access electronic health records; and work in a collaborative care model with physicians.

"The results of this study offer an innovative solution to increase the uptake of evidence-based anticoagulant therapy to prevent stroke in patients with atrial fibrillation," says Dr. Jeff Healey, cardiologist and co-investigator. "This study is the culmination of a multi-year, cross-Canada collaboration initiated by the Canadian Stroke Prevention Intervention Network (CSPIN)."

More information: Roopinder K. Sandhu et al, Stroke Risk Reduction in Atrial Fibrillation Through Pharmacist Prescribing, *JAMA Network Open* (2024). DOI: 10.1001/jamanetworkopen.2024.21993