Reducing Risk of Stroke for AFib Patients

Situation

Atrial Fibrillation (AFib) significantly increases the risk of stroke, making AFib patients five times more likely to experience a stroke compared to those without the condition. This heightened risk necessitates proactive measures to identify and manage at-risk patients effectively.

Challenge

IQVIA partnered with the UK National Health Service (NHS) to address this challenge by leveraging advanced data analytics to predict and mitigate stroke risk among AFib patients.[1]

The overall goal was to reduce the occurrence of AFib-related strokes by programmatically identifying at-risk patients and improving the use of anti-coagulation therapy in line with clinical guidelines. Ensuring uniform adoption of best practice guidelines and reducing regional variation can be challenging with at-scale population health management. To help support adoption, pharmacist resources were deployed to support patient chart review and clinical capacity for patient-facing clinics.

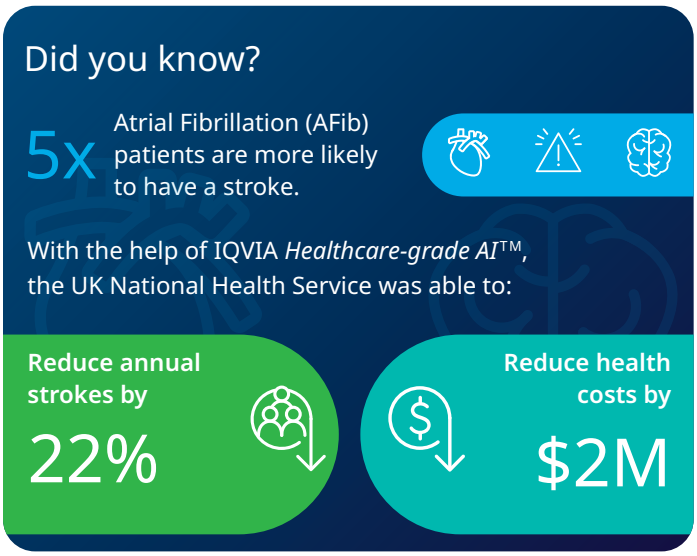
Solution

To reduce the risk of stroke in AFib patients, IQVIA and the NHS implemented a predictive Machine Learning (ML) model using electronic medical record (EMR) data. The model incorporated various patient-specific factors, including:

Demographic information: Age and gender

Clinical risk factors: Conditions such as congestive heart failure, hypertension, stroke/transient ischemic attack, diabetes, and vascular disease[2]

Results



By analyzing these data points, the model could identify patients at high risk of stroke, enabling targeted interventions and personalized care plans.[1]

The implementation of this predictive model led to significant improvements in patient outcomes:

- **Reduction in stroke incidence**: The annual number of strokes among AFib patients decreased by approximately 22% during the implementation phase compared to the prior period[1]
- **Cost savings**: The reduction in stroke incidence translated to an estimated annual savings of around $2 million in healthcare costs and $7 million in socio-economic burden costs

References

1. Pharmacist-Led Atrial Fibrillation Initiative
2. Treatment and Prevention of Atrial Fibrillation | American Stroke Association

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