

With the procedure tailored to the local characteristics of heart muscle and delivering real-time feedback on whether the lesion has been effective, he sees di-electric sensing as a 'prime example of personalized stratified precision medicine'.

Professor Ng is hopeful there will be benefits for the patient and the cardiologist with improved procedure outcomes and safety, a reduction in the need for patients to return for a repeat procedure and less use of X-ray and radiation. He added that the initial results are 'very promising'.



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The National Institute for Health Research (NIHR) Global Health Research Group on Atrial Fibrillation management



Atrial fibrillation (AF) is the most common heart rhythm disorder globally and is associated with a high risk of death, disability, ill health, and poor life quality. The main causes, high blood pressure and diabetes, are common in low- and middle-income countries (LMICs), as is AF under-treatment, leading to missed opportunities in preventing fatal or disabling strokes and cardiovascular disease.

Many patients, particularly in LMICs, are undiagnosed and not receiving life-saving treatment. Warfarin, the most common stroke prevention option, needs careful monitoring, but clinical services in many LMICs are patchy which can lead to treatment-initiation failures, insufficient monitoring/follow-up. In LMICs, newer treatments are too expensive for the majority of patients and this is compounded by patient care rarely being delivered in a joined-up or integrated manner.

We have successfully led changes in AF management locally, nationally, and internationally, in diverse healthcare systems by promoting AF detection, stroke risk assessment, and enabling clinicians to manage AF

in an integrated/holistic manner (see *Figure 1*, adapted from Armar *et al.*¹).

We are working with disadvantaged populations in China, Brazil, and Sri Lanka. These countries have different populations, risk profiles with distinct healthcare systems and needs, and even within each setting there remains considerable variation. Their AF research is limited and patient identification and management suboptimal. By co-developing/adapting known effective methods to increase awareness of AF and its complications and implement evidence-based treatments the project will contribute to improving both management pathways and most importantly lives.

The principle is to develop and adapt feasible, locally-adapted, evidence-based, sustainable pharmacological, and behavioural approaches for integrated AF management to improve care and outcomes.

This approach would be focused on the ABC pathway²:

A: 'Avoid stroke with Anticoagulation'

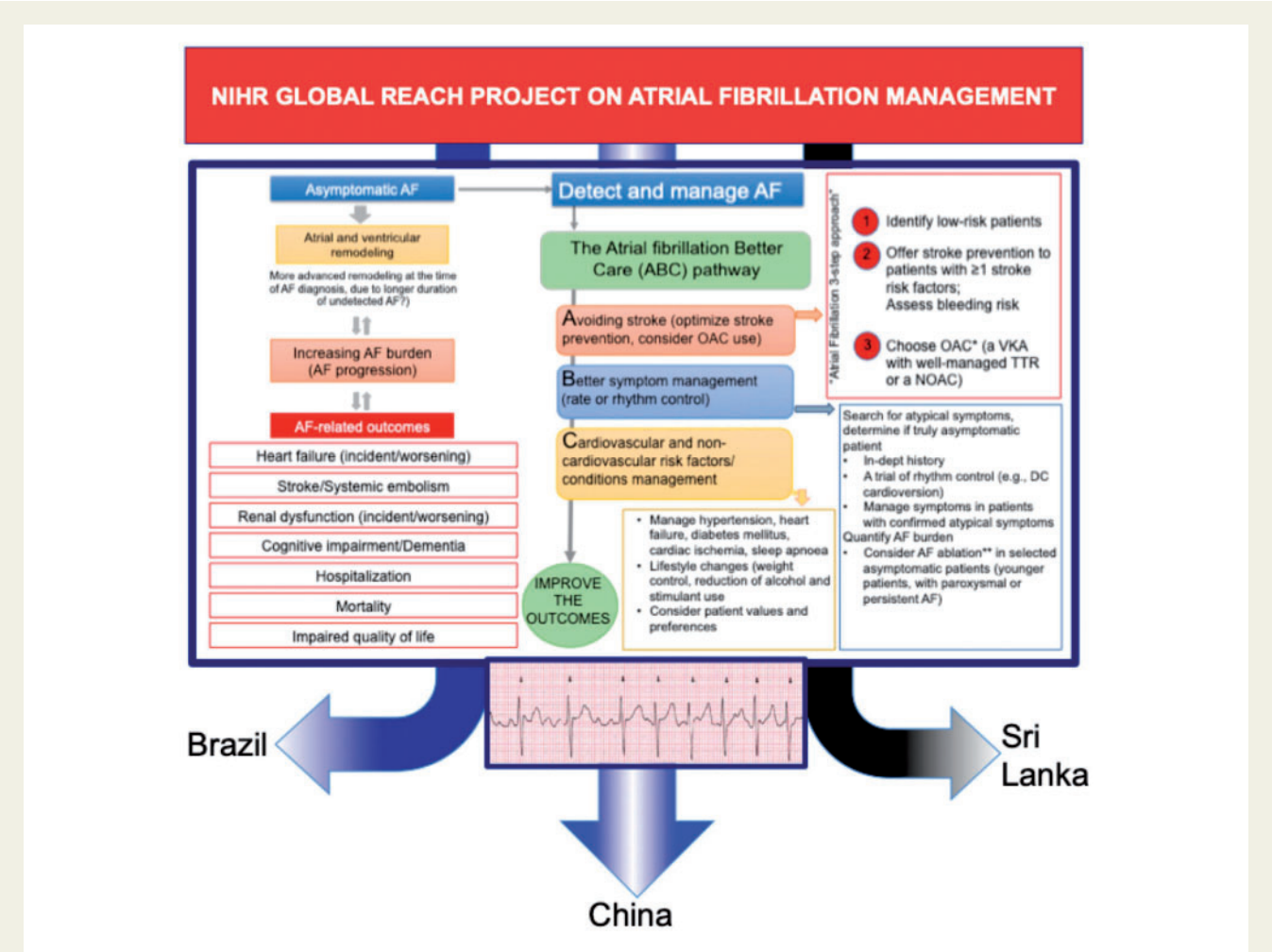


Figure 1 An overview of the integrated ABC management pathway for patients with AF.

B: 'Better symptom management' with patient centred and symptom directed approaches to rate or rhythm control.
C: 'Cardiovascular and comorbidity risk reduction' with attention to risk factors for the progression of AF and its complications, as well as lifestyle changes. Patient values and preferences would be addressed, as well as the psychological morbidity associated with AF and its complications.

The aim is to build long-term, sustainable collaborations to increase AF education/awareness amongst key stakeholders including patients,

families, healthcare providers, and commissioners and co-develop research capacity. This will be achieved through co-developed, culturally-adapted, and community-based approaches. The programme will deliver locally-focused evidence-based research to develop patient pathways to facilitate models of best care to meet patient needs, reduce healthcare inequalities, and improve well-being and health outcomes in ways that could be introduced in other developing countries in future.

In addition, we intend to empower patients through development of culturally-adapted, community-based approaches to increase education/



awareness for patients, families and health care professionals. We believe an informed and educated population is a critical mediator to improving healthcare both on an individual and system level. This would align with the evidence-based local models of best care for policy makers to improve well-being of AF patients. Finally, we intend to build a sustainable research platform for long-term future collaborations.

This 3-year funded NIHR programme has identified clinical partners in the three LMICs working in AF management who are keen to expand their knowledge in research to bring about changes that will benefit their patients and influence future methods of care. We have been working with our partners/patients to identify their training needs, formulate research questions with local stakeholders to assess need and plan effective and 'value for money' projects.

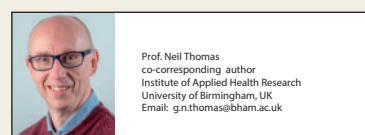
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References

References are available as [supplementary material](#) at *European Heart Journal* online.

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Atrial Fibrillation in the Era of Emerging Cancer Therapies

Atrial fibrillation (AF) is becoming a global epidemic and is predicted to affect 6–12 million people in the USA by 2050 and 17.9 million in Europe by 2060.^{1–4} Concurrently, with the advent of newer cancer therapies, global cancer survival has dramatically increased, with an expected overall survival of over 18 million persons by 2030.⁵ Increasingly, the profile of patients presenting with AF has disproportionately shifted to encompass patients with current or prior cancer diagnoses.

The 'REasons for Geographic and Racial Differences in Stroke' (REGARDS) cohort of nearly 15 500 patients reported a 20% higher adjusted risk of AF in patients with cancer compared to those without cancer.⁶ Notably, the incidence of AF was appreciated to be 3.0–4.5 times higher within the first year of a cancer diagnosis compared to later years.^{1,7} Conversely, an increased risk of cancer among patients presenting with AF has also been appreciated.⁴ For example, in a Danish cohort of 270 000 patients with new-onset AF, the standardized rate incidence ratio of cancer diagnosis was 5.11 in the first 3 months after diagnosis of AF.⁸ Similarly, Kim *et al.*⁵ reported a 2.6-fold increased incidence of a cancer diagnosis at 1 year after developing AF.

Moreover, the cardiovascular and overall prognosis with AF is worse among cancer patients compared to those without cancer, with a two-fold higher adjusted risk for thromboembolic complications, and a six-fold higher adjusted risk for heart failure,⁹ as well as a 10-fold higher risk of adjusted 30-day mortality.⁹

The increased incidence of AF in the setting of malignancy may be due to a variety of factors, including the cancer itself as well as the potential medical and surgical treatments associated with cancer

