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## Plenary II

# Preventing Stroke in Atrial Fibrillation and the Contribution of Primary Care Research

## Professor Richard Hobbs

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Professor Richard Hobbs FMedSci is currently Professor and Head of the Nuffield Department of Primary Care Health Sciences at the University of Oxford, UK. He is National Director of the NIHR (National Institute for Health Research) School for Primary Care Research (2009-), and was co-director of the NHS Quality and Outcomes Framework review panel from 2005 to 2009. He is Director of the Oxford CLAHRC (2012-), leads the Multi-Morbidity Theme of the Oxford BRC 2 (2012-17) and BRC 3 (2017-). He sits on many national and international scientific and research funding boards, including chairing the European Primary Care Cardiovascular Society. He provides expert input into a number of specialist organisations, including the Council of the British Heart Foundation and the ESC (European Society of Cardiology), the world's biggest medical society.

Professor Hobbs' research interests focus on cardiovascular epidemiology and clinical trials, especially in vascular and stroke risk, and heart failure. His publications include 28 book chapters, 12 edited books, and more than 400 original papers in such peer-reviewed journals as the *Lancet*, the *Annals of Internal Medicine*, *BMJ*, *Atherosclerosis*, the *European Heart Journal*, and *Stroke*. His research into heart failure and stroke prevention in atrial fibrillation has changed international guidelines – for example, he was CI of the BAFTA trial (confirmed the dominance of anticoagulation in SPAF and the lack of role for aspirin); CI for the SAFE trial (use of pulse palpation in screening for AF), and been a member of SPAF Registries (GARFIELD) and the ESC AF Guidelines committees.

At a national level, he has served as a trustee director for a number of charities, and been a non-executive director for the world's largest mutual indemnifier. He also sits as a trustee director on the Council of the University of Oxford. Within the UK National Health Service, he has consulted on National Service Frameworks for coronary heart disease, atrial fibrillation, heart failure, and several NICE Clinical Guidelines. He has been a physician in general practice for over 35 years, serving an inner-city community, now incorporated into the UK's largest super-partnership in primary care.

### Background importance of atrial fibrillation

Atrial fibrillation (AF) is the most common cardiac arrhythmia, present in around 1% of the population and 7% of over 65's, with US data suggesting incidence may double by 2050. The most important clinical significance of AF is the associated five-fold increase in the risk of stroke. Furthermore, AF-related strokes tend to be more severe and have higher mortality. However, AF related strokes are potentially preventable.

### What is the evidence base for preventing stroke in atrial fibrillation

There is a huge evidence base to support guideline recommendations in relation to AF and stroke risk. The treatments that modify stroke risk are confined to anticoagulants, but with a big relative treatment effect, and key primary care trials have shown the benefits even in the elderly and the lack of beneficial effect of aspirin.

The relative benefits of treated AF with anticoagulation is best determined by risk stratifying patients with AF on the basis of their CHA<sub>2</sub>DS<sub>2</sub>-VASc score. Despite this evidence base, many AF patients at high risk of stroke do not receive treatment.

### Screening for atrial fibrillation

One area that under much debate is whether we should adopt population-based screening for AF as part of a public health initiative, since AF meets many of the National Screening Committee (NSC) criteria. Several factors have led to an increased interest in AF screening:

- The prevalence of AF is increasing due to a combination of population ageing, changing patterns of risk factors and improved survival rates in other, contributory forms of cardiovascular disease.
- Newer treatments are available in the form of Direct Oral Anticoagulants (DOACS) which are probably safer and as effective in elderly patients with AF as the existing treatment mainstay of Vitamin K antagonists, but simpler to use, albeit at higher cost.
- A number of relatively inexpensive screening devices for detecting AF in the community have been developed and the field may evolve rapidly as new technologies and algorithms emerge.

The most recent European Society of Cardiology (ESC) guidelines recommend opportunistic screening for AF by pulse taking or ECG rhythm strip in patients >65 years of age. This was based on a primary care study - previously undiagnosed AF was found in 1.4% of those aged >65 years, suggesting a number needed to screen of 70.

### Summary

This presentation will describe the burden of atrial fibrillation, its importance in stroke, and summarise the risk reduction options for GPs and patients. I will also consider the debate on AF screening and what this means for general practice. Primary care studies, led by the speaker, have substantially informed this evidence base in relation to the epidemiology, the best treatment options, and the most cost effective method of screening for AF<sup>1</sup> and these data will inform the talk.