

# Stroke prevention in atrial fibrillation:

we can do better

Atrial fibrillation (AF), an irregular and often rapid cardiac rhythm, is the most common sustained cardiac dysrhythmia. Prothrombotic changes in the atrium encourage local clot formation with potential for embolisation to the cerebral circulation, conferring a fivefold increase in risk of stroke. It is estimated that one in five strokes, and one in three over the age of 80 years, are directly attributable to AF. Strokes that are due to AF also have a much worse outcome, with significantly higher mortality rates and greater long-term disability. At the same time we have very effective preventive treatments, with anticoagulants reducing the risk of ischaemic stroke by around 70%. Reflecting this, National Institute for Health and Care Excellence (NICE)<sup>1</sup> and European consensus<sup>2</sup> guidance recommends that we offer structured risk assessment followed by anticoagulation for people identified as at high risk. This pathway of diagnosis, assessment, and management does not generally require specialist input and should be regarded as essential primary care. So how well are we doing and could we do better?

### THE DIAGNOSIS GAP

The prevalence of diagnosed AF in England is 1.6%. Modelled estimates suggest the real prevalence is much higher at 2.4%, indicating that a third of individuals with AF, around half a million people in England or 2500 in the average clinical commissioning group (CCG), are undiagnosed and therefore untreated. AF prevalence increases sharply with age, with 80% of cases occurring in people >65 years.<sup>3</sup> AF sometimes causes symptoms that lead individuals to seek medical attention, but often it is asymptomatic and so will only be detected if the pulse is examined. It seems however that some patients are more likely to have a pulse check than others, with striking variation in rates of AF detection between CCGs (range 1.0 to 3.8%) and between practices (range 0.1 to 16.7%). This suggests that, even allowing for demographic differences, some practices and CCGs are much more effective than others at case finding.

### HOW CAN WE IMPROVE ON THIS RECORD?

The SAFE trial was designed to answer several questions on the epidemiology of

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AF and to identify the most cost-effective method for detecting AF in a population aged >65 years.<sup>4</sup> This large-scale multi-centred randomised controlled trial included 15 000 patients across 50 UK primary care practices (25 intervention, 25 control). The principal conclusion from the SAFE study was that active case finding in people >65 years, using simple pulse check followed by ECG for those with an irregular pulse, will identify an additional third of cases of AF. Secondary analysis of the SAFE data has demonstrated that patients detected through such case finding have at least as high a risk of stroke as those detected through routine care.<sup>5</sup>

Taking advantage of the many routine opportunities for pulse taking in our day-to-day work could therefore have a big impact on detection rates and therefore outcomes for our patients.

### THE TREATMENT GAP

So what about our record on treatment? NICE guidance recommends that all patients at high risk of stroke should be offered anticoagulants. Of course, the 30% whose AF is undiagnosed will not receive stroke prevention therapy. But how well are we doing in the patients we diagnose? The evidence is disappointing with only around 50–60% of individuals with a CHA<sub>2</sub>DS<sub>2</sub>-VASc score of ≥2 receiving anticoagulants. The impact of this is revealed in the SENTINEL national stroke audit, which shows that less than a half of people with known AF who suffer a stroke are on anticoagulants at the time of their stroke.<sup>6</sup>

One reason for this failure to offer anticoagulant treatment is that some GPs still believe that aspirin is an effective alternative to warfarin and that it is safer. Indeed, a quarter of people with AF at high risk of stroke continue to receive antiplatelet monotherapy.<sup>7</sup> The evidence against this is very clear: the BAFTA trial showed that aspirin is half as effective as warfarin in preventing strokes in people >75 while still

increasing the risk of serious bleeds.<sup>8</sup> The NICE guidance is explicit that aspirin does not have a place in management of AF and we should challenge its continued use as unacceptable practice.

Equally, GP fears that a history of falls leads to high risk of haemorrhage is not borne out by the evidence, even if falls are occurring on most days.<sup>9</sup> The novel anticoagulants offer an alternative in people who cannot tolerate or will not accept warfarin, or where optimal control is not achieved despite support with adherence. Even still, there is often reluctance to use these in general practice because of concerns over cost or fears over safety. However, there is now very good evidence that these agents are at least as effective as warfarin in preventing stroke, with a lower risk of significant bleeds.<sup>10</sup>

An additional key factor that worsens outcomes for our patients with AF is that, even when we do prescribe warfarin, the dose is often inadequate. Time in the therapeutic range (TTR) matters, with evidence that stroke risk rises rapidly as the TTR falls below 65%.<sup>11</sup> Even in well-conducted randomised trials it is often difficult to get population TTR above 60%, which reduces the clinical effectiveness of warfarin.

### SO HOW CAN WE DO BETTER?

In AF we have a common condition with serious outcomes but with excellent treatments that dramatically improve those outcomes and substantially reduce health and social care costs. We need to acknowledge that our poor record in diagnosis and treatment of AF amounts to a system failure in primary care. What can we do about this at a time when GP work pressures are rising inexorably? There are several high-impact actions that practices and CCGs could take:

- systematically examine variation between practices in detection and treatment

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rates, and consider structured support that includes clinical education, decision support, feedback, and sharing of good practice and innovation;

- use tools such as GRASP-AF and the Warfarin Patient Safety Audit Tool to audit and improve detection and treatment;
- use the wider primary care team to incorporate opportunistic pulse checking for people >65 into routine clinical activity, for example, blood pressure checks, attendance at other long-term condition clinics, flu vaccination, and pharmacy visits;
- maximise uptake of the NHS Health Check, which includes routine pulse checking, this offers a systematic approach to reaching those who we have not diagnosed in routine primary care;
- explore the use of new technologies such as WatchBP Home A to assist case finding;<sup>12</sup> and
- explore potential for self-monitoring of anticoagulant control and for community pharmacy support for anticoagulant monitoring and adherence.

Our suboptimal performance in diagnosing and managing AF is a primary care problem and it needs a primary care response. GPs, nurses, and pharmacists in the Primary Care CVD Leadership Forum, working with the Stroke Association, the Royal College of General Practitioners, the Royal College of Physicians, Public Health England, and the SENTINEL Stroke National Audit Programme, have recently published the ‘Atrial fibrillation: how can we do better?’ intelligence packs for every CCG in England.<sup>13</sup> This excellent resource provides local data showing where there is potential for improvement, together with key messages identifying the actions we can take at practice and CCG level to improve case finding and stroke prevention. And the consensus underlying the intelligence packs is loud and clear — AF: we can do better.

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