PREVENTING STROKE

SPECIAL REPORT

The first article in this series of special reports, published in *HSJ* on 3 June, looked at the risk of stroke in patients with atrial fibrillation and the need to consider how local services may be improved

This article, the second in a series of three, looks at lessons learned by cardiac and stroke networks in NHS Improvement pilots and how stroke prevention in atrial fibrillation can be developed in primary care

The final article, which will appear in the issue of 2 September, will look at developing patient pathways and examine what emerging treatments can offer in this area as well as how they might impact on service redesign

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DETECTION

Improving GPs' confidence in diagnosing and treating suspected atrial fibrillation has the potential to save lives while reducing the need for referral to secondary care. Daloni Carlisle reports

PRIMARY FORCE

While researching this piece, I asked a leading cardiologist what discussions he had had with commissioners about developing primary care services to prevent stroke in patients with atrial fibrillation – an area in which he had a particular interest. There was an embarrassing silence before he said: "I haven't had any discussions."

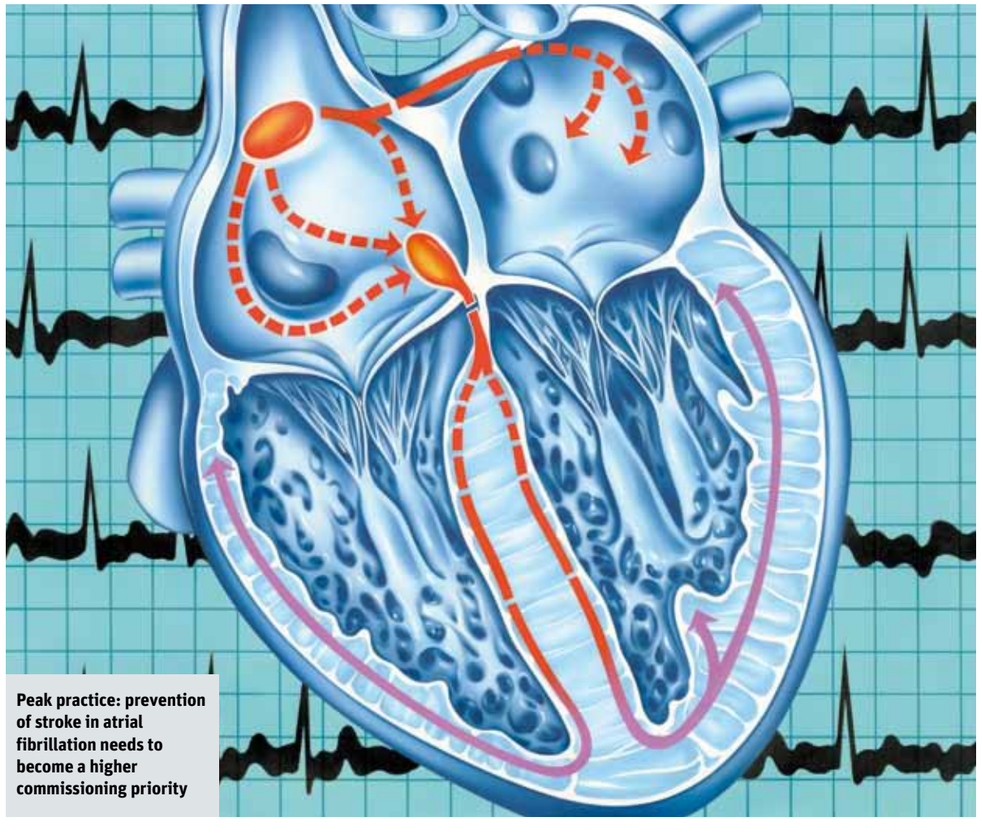
Without naming names or going into the reasons for this, it goes to the nub of the problem: stroke prevention in atrial fibrillation is not high in the priorities of commissioners despite being an area where there are not just significant financial savings to be made but also the opportunity to alleviate a good deal of suffering.

A Department of Health cost benefit analysis carried out in 2008 showed the scale of both. It suggested that for stroke patients with AF in England there are around 4,300 deaths in hospital, 3,200 discharges to residential care and 8,500 deaths within the first year.

As Campbell Cowan, consultant cardiologist and national clinical lead for the NHS Heart Improvement programme on stroke, and Matthew Fay, a GP with a special interest and national clinical lead on the Stroke Improvement Programme, noted last year: "Atrial fibrillation is the most common sustained dysrhythmia, affecting at least 600,000 [1.2 per cent] people in England alone. It is also a major cause of stroke. Uniquely, it also is an eminently preventable cause of stroke with a simple highly effective treatment. This treatment is also highly cost effective."

'Identification offers a real opportunity for cost-effective high quality care'

It was these facts that underpinned the first phase of the Heart and Stroke Improvement Programme's work on stroke prevention in AF. Fifteen of the cardiac and stroke networks took part in this national programme, working with primary care trusts, practice-based commissioning consortia and acute trusts to see how they could increase the numbers of people detected with AF; increase the numbers of diagnosed patients to undergo a review and, where appropriate, be offered optimal therapy; and to develop clear and agreed patient pathways.



Peak practice: prevention of stroke in atrial fibrillation needs to become a higher commissioning priority

The major outcomes, published in October last year by NHS Improvement, showed that:

- There is a clear variation in identification rates for AF in primary care settings.
- Opportunistic screening can significantly increase detection rates.
- Many individuals who have already been identified with AF and with known risk factors putting them at high risk of stroke are not being treated with anticoagulants.
- The management of AF in primary care is both practical and a necessity.

As Dr Cowan and Dr Fay noted in the report: "It is clear that improving identification of people with atrial fibrillation and inducing better intervention could prevent many thousands of strokes each year. The personal cost of a stroke to an individual is incalculable. To be aware that in many cases this was an identifiable and potentially avoidable situation can only increase the anxieties to the sufferer and their carers.

"The identification of those at risk and appropriate treatment offers a real opportunity for cost effective, high quality care, with the goal of preventing avoidable mortality and morbidity."

There was a great deal of learning from this work (see case studies). Broadly, they showed that opportunistic screening was not only possible, but also cost effective and could be incentivised (see case study). They developed a computerised tool to support risk stratification of patients diagnosed with AF (the GRASP-AF tool, see *HSJ* special report, 3 June) and found that a simple clinical risk score, CHADS2 (see box, page 27) was effective in helping GPs decide on starting warfarin treatment.

Nearly a year after the publication of the report, most, if not all, of the networks have gone on to share this with other networks while developing it further in their own health communities, embedding pilot projects into mainstream services. A further nine pilot studies are now under way.

'It is a really difficult issue about how we change people's minds about the safety of warfarin'

Dr Cowan says: "A lot of the work we have done has been to try to empower GPs to take decisions themselves around diagnosing AF and deciding to start treatment with anticoagulants – although in practical terms the treatment itself will be handled at a clinic, often based in secondary care."

The experience of the pilot projects shows that GPs vary enormously in their confidence and ability in this area, he says, for example in reading electrocardiograms.

"Some are very competent and others are much less so," says Dr Cowan. He adds that without a firm diagnosis, moving to treatment is difficult.

"Generally, GPs are less confident to make the decision to start warfarin treatment when they are not certain of the diagnosis and need to get confirmation of the diagnosis, usually entailing a referral to secondary care," he says.

This has implications for commissioners.

He says: "If a GP feels competent in making a diagnosis and taking a decision to commence warfarin, then patients do not need to be referred at all to a consultant cardiologist in secondary care."

The NHS Institute's guide for commissioners, published in 2009, also acknowledged the reluctance of GPs to start warfarin treatment, despite its acknowledged superiority in preventing stroke.

It notes: "Although it is inappropriate to regard this decision as necessitating a secondary care opinion, it is important to recognise that natural reservations do exist in primary care.

"Systems should be in place within a PCT to support individual GPs in risk stratification and in the decision

SCREENING FOR AF IN PRIMARY CARE

NHS Heart and Stroke Improvement pilot projects looked not just at the different ways GP practices might screen patients for AF (for example, at flu clinics, during chronic disease clinics or opportunistically as patients in a defined group presenting in primary care) but at how GPs could be incentivised.

For example, Bedfordshire and Hertfordshire Heart and Stroke Network used a local enhanced service arrangement to give GPs an incentive to screen patients at flu clinics. This was replicated in other areas, including the Colchester PBC Group, which incentivised 37 practices out of 43 to do the same.

These 37 practices screened 34,201 patients in six weeks, detecting 189 new patients with AF. The project prevented an estimated five strokes, representing an annual saving of £220,000 – a 322 per cent return on investment in addition to improved quality outcomes.

Source: *Atrial Fibrillation in Primary Care: making an impact on stroke prevention.* NHS Improvement, October 2009.

‘GPs are less confident to start warfarin when they are not certain of the diagnosis’

EDUCATION IN PRIMARY CARE

If one of the issues in stroke prevention in AF is awareness, then one of the solutions must be information and education. This is precisely what underpinned a project developed by the East Midlands Cardiac and Stroke Network.

In August 2007, the network developed a standardised information package for GP practices to support patients along the referral pathway in Northampton, including the referral pathway into the local district general hospital.

Project lead Ben Knight says: “When we looked at the Quality and Outcomes Framework data in Northamptonshire, we found that the prevalence of atrial fibrillation was about the national average, so GPs were identifying patients presenting locally.

“But when we looked at whether patients had a confirmed diagnosis and appropriate management – as reported on the second and third levels of [the framework] – we found there had been less formal diagnosis of these at-risk patients and fewer had been treated with anticoagulants than we would have expected. The assumption we made was that there was a skills gap.”

That skills gap was likely to include basic awareness about the link between AF and stroke risk, how to diagnose AF and where to refer or how to manage patients once they were diagnosed.

Working with their GP clinical lead Jonathan Shribman, the network team brought together all the relevant information from NICE on AF and developed a folder of pathways and evidence, including the use of the CHADS2 scoring system (a simple tool used to assess whether a patient should be on warfarin, see box opposite) and how to recognise an abnormal electrocardiogram.

They devised training days for GPs, practice nurses and healthcare assistants that covered how to create an AF register and how to identify patients from the database likely to be at risk of stroke from AF, as well as how to carry out ECGs.

“We covered what GP practices should be recording so that they can effectively capture the management of their patients in line with the framework,” says Mr Knight. “We did find that although work was being carried out, it was not being recorded properly.”

Alongside this, they provided a patient education package using leaflets from Arrhythmia Alliance to introduce not just medication options but also highlight what patients can do for themselves by changing their lifestyles.

Mr Knight says: “One of the things we developed was a simple A5 laminated card with the CHADS2 score on one side and a picture of an abnormal ECG on the other. This was very well received by practice nurses and healthcare assistants and helped them assess when to refer patients to the GP following an ECG taken in practice.”

The ECG education days also involved privacy and dignity issues. “AF affects older people and there are issues about asking patients to undress and where and how to place the leads,” says Mr Knight delicately. “The evaluation of these courses indicated that people felt they really helped to develop their knowledge and skills in relation to atrial fibrillation.”

Evaluating the impact of a project like this is not easy, but Mr Knight and the network are confident enough in the feedback from the courses and the progress on quality framework data to develop the programme further, for example piloting an education package on using the GRASP-AF tool (see special report, 3 June).

Mr Knight says: “We will be rolling this out across the East Midlands in conjunction with PCTs with the aim of raising awareness of the need to manage patients with AF to reduce the risk of stroke.”

Opportunistic screening can significntly increase detection rates

to commence warfarin, including confirmation of the original ECG diagnosis and subsequent risk assessment.”

It adds: “Local arrangements for assistance are likely to vary.” However, a computerised system, The Auricle3, developed by Suffolk GP John Havard, provides an assessment of stroke risk and how this might be reduced with warfarin.

“The programme additionally facilitates secondary care confirmation of the diagnosis and the decision to commence warfarin. Using the programme can avoid the need for formal secondary care referral.”

But Dr Cowan says: “We have been disappointed with the conversion from not being on warfarin to being treated effectively. Only about 10 per cent of the patients identified [in the network pilot projects] as being at high risk are converted.”

And that means they are not getting the optimal treatment.

He adds: “It is a really difficult issue about how we change people’s minds about the safety of warfarin once they have been identified as being at risk of stroke. It is partly doctors’ reluctance, because they see warfarin as a dangerous drug, and partly patients’ reluctance, because very often attending clinics every six weeks for the rest of their life is a faff, and for some of the elderly patients it is extremely difficult logistically. There is a case for redesigning services and making anticoagulation therapy as accessible as possible.”

Stroke prevention in AF, then, is not just an issue for primary care. The NHS Improvement report says: “It is clear that tools and resources are only part of the process; it requires a whole system approach to make significant and sustainable change across the whole pathway of care for patients with AF if we are to dramatically reduce their risk of stroke.

“This will require collaborative working across the whole health system between cardiac and stroke networks, clinicians, commissioners, public health and third sector organisations, in particular, to maximise benefit.”

For Dr Cowan, this raises a whole new level of engagement. “When we started to look at SPAF in primary care, we felt that we needed to engage the clinicians in primary care,” he says. “It is only quite recently that we are beginning to realise that it is also the primary-secondary care interface that requires work. The feedback from primary care is that they are on board, it is the secondary care physicians, and particularly those in elderly care, who are not. There is a gap and we have not bridged it by any means.” ●

ASSESSING PATIENTS FOR RISK OF STROKE

The CHADS2 score is a simple clinical risk score that can be used in primary care. Patients score one for each of the following risk factors:

- Congestive heart failure
- Hypertension
- Age over 75
- Diabetes
- Previous stroke or transient ischemic attack scores 2

A CHADS2 score of 2 or more approximates to the high risk group in the National Institute for Health and Clinical Excellence algorithm and can be regarded as an indication for warfarin.

Source: *Commissioning for Stroke Prevention in Primary Care: the role of atrial fibrillation.* NHS Improvement, 2009

CASE STUDY: DEVELOPING NEW ROLES

Moving patients from diagnosis with AF through risk stratification and then on to treatment is one of the biggest challenges tackled by the NHS Heart and Stroke Improvement work.

Kent Cardiovascular Network, NHS Eastern and Coastal Kent, and East Kent Hospitals University Foundation Trust addressed this by developing a new role in primary care: community arrhythmia nurses.

“The issue we faced here was that, for various reasons, general practice was not following up on AF patients,” says project manager Tim Waite. “We have very good heart failure nurses here and I had heard of arrhythmia nurses elsewhere but they all seemed to be very much acute based. I felt we needed a community role.”

He envisaged community based nurses who would help general practices identify AF patients and make sure they were on the right medication, as well as encourage them to take up opportunistic screening. Working with the cardiovascular disease commissioner in Kent, he developed a business case that was approved. The first three appointments were in NHS East Kent, where they are managed as part of the cardiology nursing team by Shelley Sage.

Community based nurses are helping GPs identify at risk patients

“They go into GP practices and search the AF register using the GRASP-AF tool to look for patients at high risk of stroke,” she says. “They find those that are not on warfarin and, where appropriate, make recommendations that they should be.”

At present, none of the three nurses is a prescriber, although that is a long term aim, adds Ms Sage.

“Theoretically they would be able to prescribe warfarin, although in practical terms that would not work as it would take all their time,” she adds.

Instead, patients are referred to the haemophilia service for stabilising and then back to the community where their medication is monitored and managed. The service has met a mixed response in general practice, she says.

“Some welcome you but others are resistant. The lack of incentives is a big issue.”

As of mid-2010, some 48 patients had been started on warfarin and a number of patients newly diagnosed not just with AF but also with heart failure. NHS Medway is about to appoint two community arrhythmia nurses and both NHS Medway and NHS East and Coastal Kent have put in permanent funding.

Mr Waite says: “The business case was very straightforward and identified the clinical case as well as the fact that it was going to save money by reducing stroke and admissions to hospital. It fits very neatly with QIPP too.”

To obtain a copy of the business case email tim.waite@nhs.net

ALAMY, SPL