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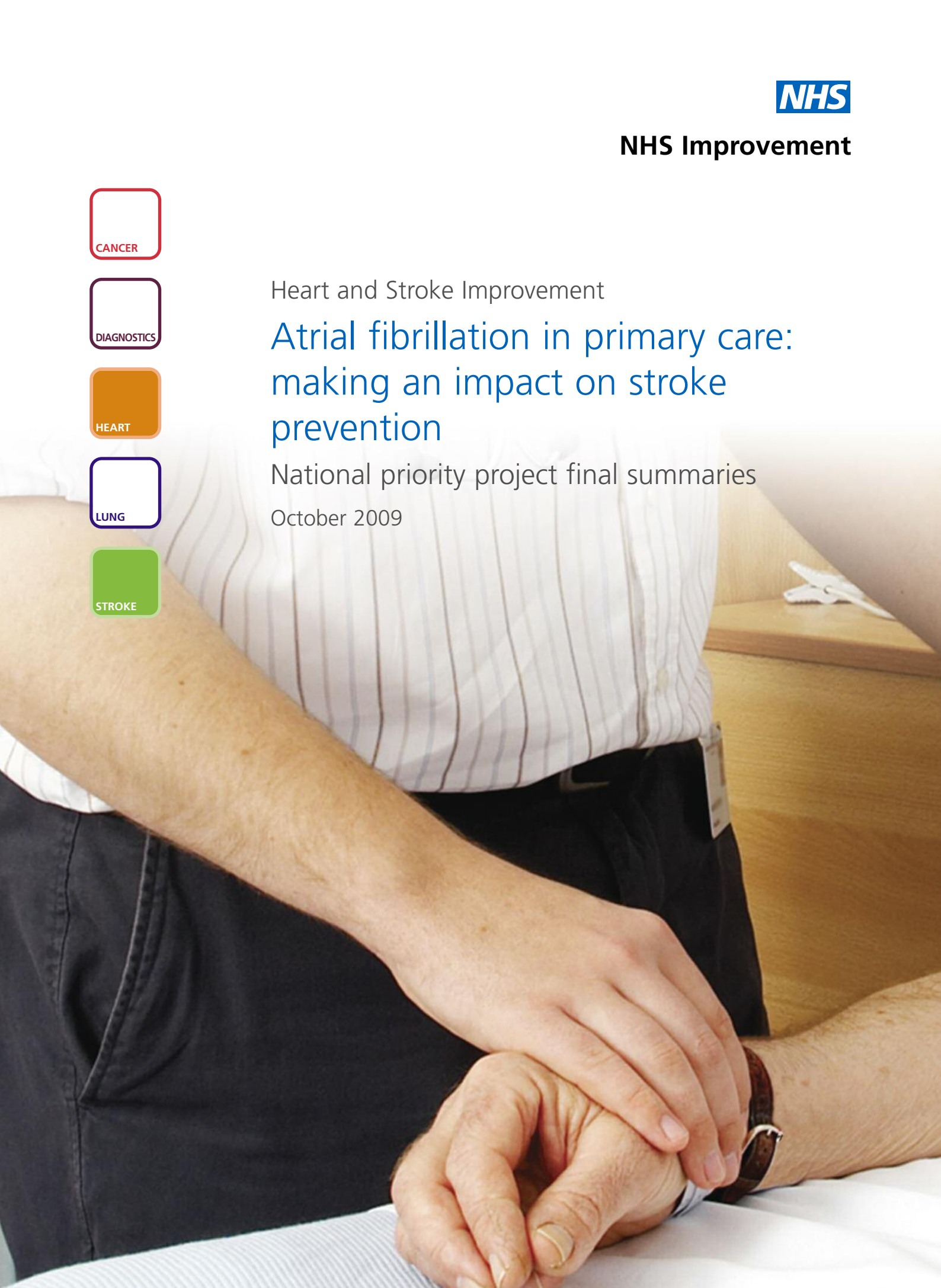
Heart and Stroke Improvement

Atrial fibrillation in primary care: making an impact on stroke prevention

National priority project final summaries

October 2009



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Foreword

Atrial fibrillation (AF) is the most common sustained dysrhythmia, affecting at least 600,000 (1.2%) 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.

These facts underpinned the first phase of the Heart and Stroke Improvement Programmes' work on stroke prevention and atrial fibrillation. Fifteen cardiac and stroke networks participated in the national programme working with primary care trusts (PCTs), general practices, practice based consortia (PBC) and acute trusts. Projects were undertaken addressing the detection of atrial fibrillation, whether patients are appropriately treated with anti-coagulants and considering the best pathways for managing atrial fibrillation in primary care.

The major outcomes of this work continue to demonstrate:

- A clear variation in identification rates for atrial fibrillation
- That opportunistic screening can significantly increase detection rates
- That many individuals who have already been identified to have atrial fibrillation and with known risk factors putting them at high risk of stroke, are not being treated with anti-coagulants
- That the management of AF in primary care is both practical and a necessity.

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 achieving cost effective, high quality care, with the goal of preventing avoidable mortality and morbidity.

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Introduction

These national priority projects were established in 2007 in response to Chapter Eight of the National Framework for Coronary Heart Disease; Arrhythmias and Sudden Cardiac Death, published in March 2005, which set out the quality requirements for the prevention and treatment of patients with cardiac arrhythmias.

This is underpinned by the publication by NICE in 2006 of 'Atrial Fibrillation. The management of atrial fibrillation costing report' which highlighted that amongst patients with recognised AF, 46% of those who would benefit from warfarin are not receiving it. Out of an estimated 355,000, only 189,000 were actually receiving warfarin.

In December 2008 the publication of the National Stroke Strategy affirmed the importance of this work for stroke prevention. Quality Marker 2 states:

- 'Markers of a quality service: Risk factors, including hypertension, obesity, high cholesterol, atrial fibrillation (irregular heartbeats) and diabetes, are managed according to clinical guidelines, and appropriate action is taken to reduce overall vascular risk
- Action needed: Commissioners and providers use ASSET to establish baseline and to ensure that there are systems in place locally for the following key prevention measures: warfarin for individuals with atrial fibrillation
- Measuring success: Greater proportion of individuals who have a history of stroke or cardiovascular disease or who are at a high risk who have had advice and/or are receiving treatment'.

Atrial fibrillation is a major predisposing factor to stroke, with 16,000 strokes annually in patients with AF of which approximately 12,500 are thought to be directly attributable to AF. The annual risk of stroke is five to six times greater in AF patients than in people with normal heart rhythm and is therefore a major risk factor for stroke.

Appropriate anti-coagulation of all patients with recognised AF would prevent approximately 4,500 strokes per year and prevent 3,000 deaths.

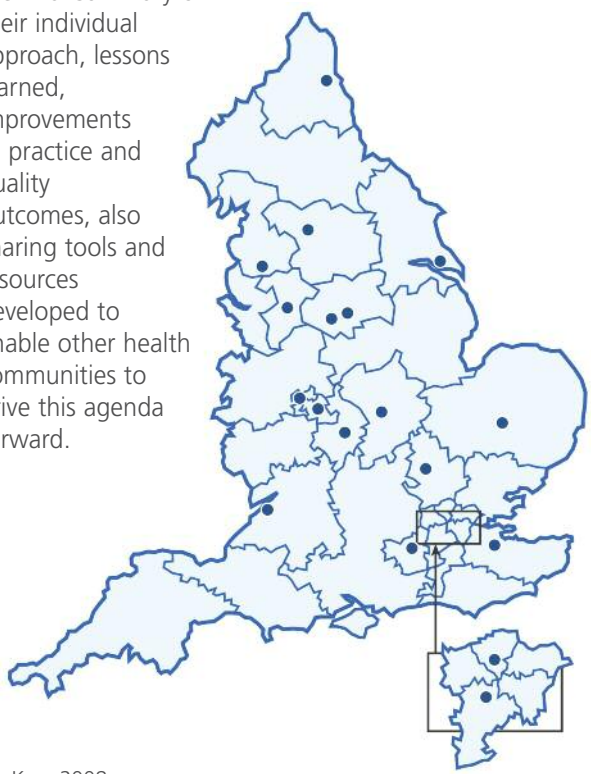
A recent Department of Health[1] cost benefit analysis suggests that for stroke patients with AF there are around:

- 4,300 deaths in hospital
- 3,200 discharges to residential care
- 8,500 deaths within the first year.

However,

- The treatment of AF with warfarin reduces risk of stroke by 50-70%
- The estimated total cost of maintaining one patient on warfarin for one year, including monitoring, is £383
- The cost per stroke due to AF is estimated to be £11,900 in the first year after stroke occurrence.

The early learning from the eighteen individual projects established was first published in May 2008 '**Atrial Fibrillation in Primary Care: National Priority Project**' (www.heart.nhs.uk/priority_projects/summary_documents/af_summary.pdf). This document aims to capture the final summary of their individual approach, lessons learned, improvements to practice and quality outcomes, also sharing tools and resources developed to enable other health communities to drive this agenda forward.



[1] Department of Health Atrial Fibrillation cost benefit analysis. Marion Kerr, 2008.

Key learning

A variety of approaches were undertaken responding to the needs of the local health communities; however each project sought to establish a baseline to demonstrate improvements to changes in practice against:

- Numbers of new patients with AF identified, and their subsequent treatment
- Numbers of existing AF patients reviewed and, where necessary, subject to optimal therapy
- Establishment of a clear and agreed patient pathway for AF patients.

Innovation

Key areas for the piloting new approaches centred on:

- Detection of AF though opportunistic screening at flu clinics
- Local enhanced service (LES) schemes for detection, screening and review of AF
- New models for anticoagulation services in primary and community settings
- Development of tools to support the review of patients with AF, risk stratify for stroke and consider optimal therapy:
  - The Guidance on Risk Assessment for Stroke Prevention in AF (GRASP-AF) tool now available for use across all GP clinical systems via www.improvement.nhs.uk/graspaf
- Decision support tool 'the Auricle' www.theauricle.co.uk
- Guidelines for primary to secondary care referral.

Education

All projects found the need to include education for professional and patients around:

- Pulse palpation
- Barriers to anti-coagulation in primary care
- ECG training and interpretation
- Patient awareness.

Partnership working

Opportunities have been sought both nationally and within local projects to work with the third sector and professional health organisations to develop supporting resources, tools and educational information to meet the continuous requirement for ongoing and relevant information for both the professional and the patient.

These have included:

- Department of Health (DH)
- National Institute for Clinical Excellence (NICE)
- Primary Care Cardiovascular Society (PCCS)
- Atrial Fibrillation Association (AFA)
- British Heart Foundation (BHF)
- Heart Rhythm UK (HRUK)
- The Stroke Association (SA)
- Primary Care Information Management Service (PRIMIS)
- Ambulance services.

Quality outcomes

Many of the approaches have already begun to spread across the network of priority projects and through sharing the work nationally through NHS Improvement national learning events.

In particular we have seen:

1. The early piloting of opportunistic screening through pulse palpation at flu clinics by Bedfordshire and Hertfordshire Heart and Stroke Network which has led to this initiative being replicated in other areas. For example:
- The Colchester Practice Based Commissioning Group incentivised 37 practices out of 43 to undertake this approach enabling:
  - 34,201patients to be screened in six weeks
  - 189 patients found with AF (0.55%)
  - Estimated numbers of strokes prevented next year = 5
  - At an estimated annual cost saving of £220,000 this represented 322% return on investment in addition to improved quality outcomes for patients.
2. The GRASP-AF tool developed and piloted by the West Yorkshire Cardiovascular Network in collaboration with their BHF Arrhythmia nurses and PRIMIS for use on GP clinical systems to identify for review AF patients with high risk of stroke, not on warfarin, has now been made available for use across England.

The York Health Group PBC cluster used GRASP-AF across their 24 practices with a total population of 228,651 patients of which 3,613 patients with AF were identified.

By June 2009:

- The total number of reviews undertaken 716
- Of which face-to-face reviews 110
- New warfarin prescription 41(6%)
- Awaiting further review including consultant referral 37.

Access to the GRASP-AF tool is through www.improvement.nhs.uk/graspaf and has already been downloaded by over 100 practices in the first couple of months of release.

Summary

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.

Action was sought with key stakeholders to bring together a consensus approach across England to address the key factors in influencing, educating and encouraging change in the identification and management of these patients culminating in the publication in June 2009 '**Commissioning for Stroke Prevention in Primary Care - The role of Atrial Fibrillation**' (www.improvement.nhs.uk/heart/Portals/0/documents2009/AF_Commissioning_Guide_v2.pdf).

The next stage of this work will commence with a further nine projects from October 2009, building from this platform of evidence based learning and demonstrable outcomes for the improvement of the identification, diagnosis and optimal therapy for AF patients.

Further pilots will also be undertaken to:

- understand the issues and potential solutions for the management and optimal therapy for stroke and TIA patients with AF
- to model the potential impact on current services of new drugs for patients with AF.

In addition, to support communities that have added pulse palpation as part of their NHS Health Check Programme, to have access to the learning for the management in primary care for patients with AF.

The work of this national priority 'stroke prevention in primary care: addressing atrial fibrillation' supports the national drive for:

- Quality outcomes through addressing optimal therapy for AF patients
- Innovative approaches to access and management in primary care for AF patients
- Productivity through reducing inappropriate referrals to secondary care and bed days saved
- Prevention by reducing risk of stroke.

Many of these project sites are continuing to take this work further into implementation, with the aim to embed into core practice and continue to share their learning both nationally and locally through the cardiac and stroke networks and national learning events.

The following case study summaries represent an overview of their work achieved by the end of April 2009 and the tools and resources they have generously made available to share can be accessed from the NHS Improvement website at: www.improvement.nhs.uk/afprojectsummaries

A sector wide approach to optimising therapy for Atrial Fibrillation patients in Primary Care

South West London Cardiac and Stroke Network, Richmond and Twickenham PCT, Wandsworth tPCT, Kingston PCT, Sutton and Merton PCT, Croydon PCT, St George's Hospital, Kingston Hospital, Epsom and St Helier Hospitals, Mayday Hospital, Queen Mary's Hospital, Roehampton

Duration of project

June 2007 - still ongoing

Scope of project

The project planned to improve the quality of initial diagnosis and ongoing management of existing patients with atrial fibrillation through several different mechanisms:

- The agreement of sector wide guidelines, pathways and protocols for:
  - the management of atrial fibrillation in primary care
  - rapid access arrhythmia clinics
  - cardioversion
- The development of an audit tool for use across the sector
- A coordinated approach to supporting practices to carry out the audit
- The delivery of an education event to support primary care.

Baseline position

A preliminary audit from one practice suggested that at least 30% of patients on the AF register could benefit from having their therapy optimised.

What we did

Sector wide guidelines for the management of atrial fibrillation in primary care were developed with the clinical lead and a GP lead for CHD from one PCT with input from the cardiac network. These were then launched at an educational event attended by over 50 GPs. The guidelines went to the prescribing committee of each PCT in the network.

Through a sector wide team of BHF arrhythmia nurses, we worked with each individual PCT and acute trust to agree pathways and protocols for rapid access clinics to ensure timely and accurate assessment and diagnosis and also cardioversion services to ensure timely treatment where appropriate.

We carried out the audit in two practices to develop and refine the audit tool. We then attended the relevant cardiac meetings in each PCT to discuss this work and offer support to targeting practices. The audit tool was also offered to each PCT. One PCT adopted the audit to investigate and address anticoagulation therapy as part of its prescribing incentive scheme with take up varying across PBC clusters. A BHF arrhythmia nurse supported one practice to review and optimise all identified patients.

An education event was organised, covering all aspects of arrhythmias but with a focus on the management of atrial fibrillation in primary care. 92 people attended and 98% of people completing evaluation forms said that they had learnt something that would change their current practice.

As this work developed, we also had the opportunity to take part in a pilot for The Auricle, a web based tool that has been created by a GP in Suffolk to guide GPs through reviewing their AF patients CHADS2 score and their medication. The tool also has the capacity to send the information to a consultant in local hospital for additional comments and decision support via email (and for a small fee), potentially saving on unnecessary outpatient appointments. As this appeared to fit well with the aims of our project to improve diagnosis and management of patients with atrial fibrillation, we spent a significant amount of time developing links between one PCT and an acute trust and progressing a pilot project. However, the PCT then decided that they did not want to proceed with the pilot but wanted to develop a local algorithm to refer to the BHF arrhythmia nurse rapid access clinic at the acute trust.

Key challenges

The main challenge was competing workloads for network staff and BHF arrhythmia nurses. In the areas where we were most successful at progressing this project, it required significant input from network staff and a BHF arrhythmia nurse to keep the momentum going and make progress.

Although PCTs expressed an interest in the audit tool, the take up was low. It may have been more appropriate to share this at PBC and/or individual practice level to ensure all practices were aware of this. Where we did share the audit tool, there was little feedback from practices as to how many patients had been identified and reviewed, despite requesting this information when the tool was shared.

Changing priorities for PCTs also provided a challenge, especially for The Auricle element of this work.

What went well
The development of local pathways and protocols has ensured that there is a joined up approach to diagnosis and management of patients with atrial fibrillation. For example, patients who are sent by their GP for an ECG who are found to be in atrial fibrillation have their ECG report sent back to their GP together with a referral form for the rapid access arrhythmia clinic. Rapid access clinics are ensuring that patients are seen in a timely manner.

The adoption of the AF pilot as part of the prescribing incentive scheme was a good mechanism to drive this work forward to a wider audience, although take up varied across PBC clusters in the PCT.

The BHF arrhythmia nurse working with a practice to review all patients who had been optimised as on sub-optimal therapy ensured these patients were reviewed in an appropriate manner. The practice was very positive about this level of support and the additional informal learning that this method offered.

The education events were extremely well received with positive feedback from attendees.

Key learning from work
- It is important to have network staff to drive this work forward at PCT level as without it, this work slows down or stops
- BHF arrhythmia nurse services need to be linked into primary care to ensure there is an appropriate route for patients to receive fast and accurate diagnosis and ongoing management.

Outcomes
- 200 existing AF patients were reviewed at three practices and where appropriate, their treatment was optimised
- Clear pathways have been agreed at five acute trusts and four PCTs, with 100 patients benefiting from the new AF pathway at one acute trust, with similar uptake across all trusts in the sector
- Over 200 patients benefited from faster access to cardioversion at one trust. Wait times were halved from 12 weeks to six weeks as part of the establishment of a clear and agreed pathway for AF patients
- Three out of 10 practices in one PBC cluster adopted the prescribing incentive scheme at one PCT
- 150 clinicians attended two educational events.

Challenges for sustainability
As mentioned previously, it is important to ensure that this work remains a priority with cardiac and stroke networks to support and facilitate PCTs to drive this work forward.

Costs incurred
None, as this project was carried out using existing staff and resources.

Patient, carer and staff involvement
Patients have been very positive about the services provided by the BHF arrhythmia nurses and their ability to see patients in a timely manner.

The practice who worked with a BHF arrhythmia nurse to review atrial patients was very positive about this level of support and the additional informal learning that this method offered.

The network's patient and carer representative group is keen for this work to be extended to include identification of new cases of atrial fibrillation.

Resources and tools developed to support the changes
Available for sharing via the South West London Cardiac and Stroke Network website at: www.southwestlondoncardiacnetwork.nhs.uk
- AF audit tool for GP practice.

Future plans
The next stage of this work would be to develop and adopt a sector wide approach to the identification of new cases of atrial fibrillation and ensuring appropriate diagnosis and ongoing management for this group of patients.

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