Healthcare Pioneers
Showcasing innovative practice in Atrial Fibrillation

Supported by:
All-Party Parliamentary Group on Atrial Fibrillation

October 2011
Foreword

Glyn Davies MP

As Chair of the All-Party Parliamentary Group on Atrial Fibrillation, I would like to thank those Healthcare Pioneers featured in this booklet, and many of the other unnamed clinicians who are working hard up and down the UK to deliver innovative and cost-effective services to patients affected by Atrial Fibrillation (AF). The ten examples featured in this booklet are only a small part of the picture.

When reading this booklet, I hope you find it enlightening and useful to hear of Healthcare Pioneers who are working collaboratively – whether it is the local ambulance trust, a community pharmacy or a cardiology department – to increase diagnosis and improve the treatment and care for patients with AF.

With your help, we can spread this innovative practice even further to ensure that all patients have the opportunity to receive quality and consistent care.

I was diagnosed with AF in 2010. In fact, I went into AF just ahead of my scheduled Maiden Speech in the House of Commons. As a patient myself, I therefore know of the importance of receiving an early diagnosis and having a healthcare team working across the entire care pathway who are able to work for, and with, me to manage my condition.

The prevalence of AF is increasing. In England approximately 940,000 people have been diagnosed with AF, with another 50-100 per cent estimated to be undiagnosed. To the future, there is a predicted rise in AF cases of between two-three fold. Thus, if your commissioner can glance over this booklet and see if just one of these ideas for successfully managing AF patients would be appropriate for your local area, this will help to ensure more people are diagnosed and treated for AF, thereby preventing undue stress, stroke and possibly death.

Thank you.

Glyn Davies MP
Chair, All-Party Parliamentary Group on AF
Introduction

Trudie Lobban MBE

As you are probably aware, AF is the most common heart rhythm disorder in the UK and affects about one-two per cent of the population. It is a major predisposing factor for thrombo-embolic strokes that are often very severe in their nature and can lead to long-term disability or death. On top of the enormous human impact, it is estimated that AF costs the NHS £1.8 billion every year.

Many of these costs, both societal and financial, could be mitigated by a nation-wide adoption of successful clinical practice in diagnosing, managing and treating AF. However, innovative techniques often emerge as a result of localised efforts; sometimes from the idea of a single individual, and can therefore struggle to receive wide attention and broad implementation.

I am therefore delighted to introduce this Healthcare Pioneers booklet, which aims to contribute towards wider dissemination of successful local practice. It includes ten case studies, which, if implemented on a wider scale, could deliver substantial health benefits to patients and significant efficiency savings to the NHS. They should act as an inspiration as well as a guide for local healthcare commissioners who may choose, adapt and implement ideas most applicable to their local populations.

The case studies were provided by AF champions from a range of backgrounds and, as such, target improvements across the entire patient pathway; starting with community pharmacies and stretching from primary to secondary and tertiary care. In adopting some of these innovative measures, local healthcare commissioners would take a major step towards ensuring earlier and more effective AF care and easier access to expert advice for all AF patients in their area.

I would like to thank the authors of these case studies for taking the time to share their experiences with a wider audience and participating in the creation of this booklet. I look forward to working with policy makers and the patient community to ensure that the successful clinical practice that these examples embody receives attention from commissioners across England and Wales.

Trudie Lobban MBE
Chief Executive and Founder, Atrial Fibrillation Association
Spreading Local Innovation

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Screening of 999 Callers

Mr David Coates
Reperfusion Lead, Great Western Ambulance Service NHS Trust (GWAS)

Key Points:
- Raising ambulance clinician awareness of AF-related stroke risk
- Inclusion of AF screening in clinical assessment of 999 callers
- GP notification procedure to enable the reporting of incidental findings of AF
- Production of a patient information leaflet

The ambulance clinician screening of 999 callers for undiagnosed AF and high blood pressure is a new and innovative way of identifying AF and hypertension patients that are unaware of their conditions. The scheme effectively incorporates the AF screening process into the clinical assessment of patients who do not require conveyance to hospital following their call. The screening process was developed using the principles of the Stroke Association's Know Your Blood Pressure campaign and was endorsed by the local cardiac and stroke network.

"If it is found that the caller has AF or hypertension, they are provided with advice and a patient information leaflet..."

When patients are attended to as a result of a 999 call and do not require conveyance to hospital, GWAS clinicians are asked to screen for undiagnosed AF or a high blood pressure reading. If it is found that the caller has AF or hypertension, they are provided with advice and a patient information leaflet, which has been designed with the GWAS patient reference group specifically for this purpose. Following the ambulance visit, the clinician completes a GP notification letter and hands it over to the patient or carer for delivery to their GP the next working day.

"Following the ambulance visit, the clinician completes a GP notification letter and hands this over to the patient or carer for delivery to their GP the next working day."

This initiative was funded from a successful bid to the local Strategic Health Authority for stroke care initiatives and the initial print run costs were only £645. Taking into account the benefits the scheme offers in terms of spreading awareness of AF and hypertension amongst ambulance staff and patients, integrating patient pathway and above all diagnosing new cases of AF and hypertension, it is definitely a price worth paying.

For more information on the Screening of 999 Callers initiative please contact Mr David Coates on david.coates@gwas.nhs.uk.
Waltham Forest PCT recognises that providing a high quality service for people with AF can go a long way in reducing stroke incidence and preventing the human and financial costs associated with it. With this in mind, it decided to deliver a Community AF Service. This service targets a reduction in the incidence of stroke through the provision of a high quality, close-to-home service for people with AF. As part of this project the PCT set upon a major awareness raising campaign designed to highlight the importance of pulse checking amongst the GP practice staff as well as the public.

With a robust advertising campaign at the centre of this initiative, the project team attended numerous meetings with health professionals in order to engage them on the subject of AF and pulse checks. In addition, they also attended several flu clinics, ran an advert in the local newspaper and organised a poster campaign to make sure that GP practice staff were on board with the project’s objectives.

Furthermore, a special effort was made to raise awareness of AF amongst the general public. Two interactive pulse check events were staged with the help of the London Ambulance Service. At these events the project lead addressed the public and highlighted the importance of knowing one’s pulse and having it checked by a health professional during every GP visit. Attendees were shown how to monitor their pulse themselves and were asked to check the pulse of their family members as well.

“Attendees were shown how to monitor their pulse themselves and were asked to check the pulse of their family members as well.”

Alongside its awareness raising campaign, the PCT also endeavoured to get the GRASP-AF tool, which scans GP databases to identify AF patients who could benefit from blood-thinning drugs, installed at every practice in its region.

This programme was funded from monies secured by the Department of Health as part of a national priority project to pilot this unique model of service for one year. While it is impossible to put an exact figure on the savings achieved by this programme, thirty-eight new patients were commenced on anticoagulation as a direct result of this project, which has roughly equated to one case of stroke prevented. This in itself would represent a saving of £44,000 for the first year to the NHS. It is also clear that additional savings were made through AF patients being catered for by the Community AF Service rather than more costly secondary care specialists.
Having observed that Carmarthenshire's AF prevalence rate of 2.02 per cent is significantly higher than the national average, Dr Lena Marie Izzat established a formal Multidisciplinary AF Clinic for the Hywel Dda Health Board, which went live in January 2009.

This clinic is designed to provide care to newly diagnosed AF patients as well as those with established conditions (paroxysmal or permanent), which have proven difficult to control. It is open to referrals from GPs, specialist and practice nurses, and all other physicians and casualty doctors. The clinic has been set-up as a one-stop shop, so in just one visit its users can expect to receive a comprehensive cardiovascular and thrombo-embolic stroke risk assessment using CHADS2 and CHADS2VASc, a full physical examination as well as an electrocardiogram and an echocardiogram wherever appropriate. On the very same day, the patient is typically assessed by Dr Izzat herself, a CV specialist nurse and an anticoagulant nurse, who is able to offer counselling on warfarin management wherever indicated. Before leaving the clinic, every patient will have developed a clear rhythm or rate control management strategy and will have their stroke risk fully assessed.

In cases where an ablation or a specialist tertiary intervention is warranted, the patients benefit from the clinic's close working relationship with the tertiary cardiac centre in Swansea. Moreover, for those patients requiring DC cardioversion, the clinic has secured a dedicated fortnightly list with anaesthetists, where patients – as soon as the clinic's cardiac nurses are satisfied with the level and duration of necessary anticoagulation – attend a dedicated cardiac procedure suite. The seamless transfer of information between various departments allows for the holistic management of most patients in a single visit.

The service provided by Dr Izzat's clinic successfully targets an area where the needs of NHS patients might not be fully met. The value of this service is clearly manifested by the fact that 50-60 per cent of patients that used the service qualified for anticoagulation, which was commenced on the day of their clinic visit.

No additional funding was received for this clinic.

While it is difficult to empirically assess the cost savings achieved by this clinic, it is clear that Dr Izzat’s efforts have contributed to preventing a significant number of strokes and other potential complications, the treatment of which would have cost the NHS a lot more than the preventative measures provided by the AF clinic.

For more information on AF Clinic in Llanelli please contact Dr Izzat on 07976 289 560 or at lena.izzat@carmarthen.wales.nhs.uk.
With the overall objective of detecting previously undiagnosed cases of AF, forty-four practices within the North East Essex region were commissioned to undertake AF screening as part of flu clinics through a Local Enhanced Service (LES). This AF Flu LES, which is known as the Pulse Beat campaign, aims to uncover new cases of AF in an efficient and cost-effective manner and to follow them with the initiation of appropriate care if necessary. The LES was taken up by an average of thirty-two practices over the last three years.

The risk of developing AF increases with age and is moderately higher during the winter season. This service is therefore run within the over sixty-fives' influenza vaccination programme between October to January. The patients are selected for screening based on being over the age of sixty-five and not having any previous significant arrhythmia recorded. The eligible patients are checked for AF by a pulse palpation and the findings are recorded in their clinical records using agreed Read Codes. If the pulse is found to be irregular, further evaluation is promptly arranged.

Patients with an irregular pulse are typically investigated with a twelve lead electrocardiogram, in line with NICE guidance. In addition, they are also offered an overall evaluation of cardiovascular risk including clinical assessment of cardiovascular system, blood tests (lipid profile, renal function, fasting glucose, Full Blood Count, thyroid function), BMI and Urinalysis. Furthermore, a CHADS2 stroke risk score is also calculated for the newly diagnosed AF patients. Even though the management of cardiovascular risk factors, including anticoagulation, is not specified in the LES contract the GPs are advised to deliver “usual care”, which may include the initiation of Warfarin, heart rate control or a referral for cardioversion.

The Pulse Beat initiative is funded from the North East Essex Clinical Commissioning freed up resources budget and with all practices already in possession of electrocardiogram equipment, there was no initial equipment or implementation cost.

During the first two years of the project, 374 new patients with AF were detected. With the instigation of appropriate antithrombotic treatment, it is estimated that 50-70 per cent of strokes could be avoided. In this case, this equates to prevention of between eight to twelve strokes, saving the NHS between £95,200 and £142,800 in first year health costs.

For more information on the Pulse Beat initiative please contact Dr Shane Gordon on 07887 725 416 or at shane.gordon@nhs.net.
Despite a freeze on all new developments in her hospital, Dr Diane Bruce succeeded in setting up a cost-neutral dedicated Rapid Access AF/Flutter Clinic to manage patients with AF, and in turn, to prevent AF-related complications. The clinic is available to six new patients every week and Dr Bruce also runs two AF follow-up clinics per month. The clinic is designed to provide assistance to arrhythmia patients at the earliest opportunity possible.

During their clinic visits, Dr Bruce’s patients benefit from instant access to an experienced consultant with advice on the best management of AF as well as with an expert opinion on drug management, appropriate referrals for cardioversion and the suitability of ablation. Furthermore, patients are encouraged to bring along their partners or carers and are provided with AFA information booklets, which gives them the opportunity to familiarise themselves with their condition and helps them manage it more effectively.

During her Rapid Access AF/Flutter Clinic hours, Dr Bruce currently sees approximately twenty-four new patients a month and ensures that all of them have access to a twenty-four hour tape, twelve lead electrocardiogram and an echocardiogram. In addition, she is also in the process of developing an arrangement through which patients will acquire access to two urgent cardioversion slots per week and could benefit from transoesophageal echocardiogram guided cardioversion if necessary.

At the end of every patient’s visit, a pro forma report is produced and then sent to the patient’s GP. This pro forma report was devised in collaboration with the hospital’s IT department and lends itself well to effective auditing as it records CHADS-VASc as well as HASBLED scores. This data recording practice not only contributes towards further integration of the patient pathway but also saves valuable secretarial time as no additional letters need to be produced. As Dr Bruce points out, the fact that the project does not increase the secretarial workload proved to be the decisive argument in the hospital’s decision to allow her to proceed with this initiative.

Despite the fact that the Rapid Access AF/Flutter Clinic is cost neutral, it has great potential to deliver efficiency savings in the NHS. The savings can be delivered through the prevention of AF-related complications and through the reduction in the number of inappropriate clinic visits to non-specialists.

For more information on the Rapid Access AF/Flutter Clinic initiative please contact Dr Diane Bruce on 01202 448 255 or at diane.bruce@poole.nhs.uk
The Westcliffe Cardiology Service was set up with the objective of providing assistance to the local primary care clinical practices in dealing with patients with established, new onset or suspected cardiac problems.

The Westcliffe Cardiology Service offers primary care clinicians a range of options to choose from when requiring specialist assistance. These options range from a simple case review and advice through to the shared record of TPP SystmOne to direct access to cardiac investigations (e.g. electrocardiogram, echocardiogram and rhythm assessments of various durations). The results of these investigations are recorded in a report accompanied by expert advice and on-going management plan. Furthermore, if required, the clinician can use the Westcliffe Cardiology Service to book a traditional out-patient review style appointment.

Whatever the nature of the assistance that is being provided by the Westcliffe Cardiology Centre, all the patient information is entered directly into a shared patient record of SystmOne, making it instantly accessible to the clinician.

The Westcliffe Medical Partnership always attempts to put the patient at the centre of care. In relation to the cardiology service, this endeavour was translated into the development of locality hubs around NHS Bradford Airedale. The existence of these hubs ensures that patients do not have to travel long distances to their tests or appointments.

Furthermore, the service also supports the education of practice nurses and GPs in the region. This training enables the practice staff to help support the patients once they are discharged by the specialist services.

The service is funded on a cost per case locally negotiated tariff. Please see the below table for examples:

<table>
<thead>
<tr>
<th>Brief description of service</th>
<th>2011/12 Tariff</th>
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<tbody>
<tr>
<td>GPwSI-led with BRI &amp; Airedale Consultants support. Pick &amp; Mix options for referral:</td>
<td></td>
</tr>
<tr>
<td>• Advice only (No appointment or investigations)</td>
<td>£25</td>
</tr>
<tr>
<td>• Direct access 24hr electrocardiogram and interpretation</td>
<td>£84</td>
</tr>
<tr>
<td>• Direct access 12-lead electrocardiogram and interpretation</td>
<td>£42</td>
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<tr>
<td>• Direct access 24hr BP and interpretation</td>
<td>£51</td>
</tr>
<tr>
<td>• Direct access echo and GPwSI interpretation &amp; care plan</td>
<td>£124</td>
</tr>
<tr>
<td>• GPwSI full package, including first GPwSI appointment, all above investigations and Consultant input as clinically appropriate</td>
<td>£152</td>
</tr>
<tr>
<td>• GPwSI full package as above – follow-up appointment (Continue to refer to the Hospital Rapid Access Chest Pain clinic for acute chest pain)</td>
<td>£84</td>
</tr>
</tbody>
</table>

For more information on the Westcliffe Cardiology Service please contact Dr Matthew Fay on 01274 580 787 or at matthew.fay@bradford.nhs.uk, or Julie Winterbottom on 01274 609 682 or at julie.winterbottom@bradford.nhs.uk
With the overall aim of preventing strokes, Surrey Heart and Stroke Network have presented their case to include the ambitious 2011-2012 QIPP Programme on AF to NHS Surrey. In accepting this proposal NHS Surrey made a major step towards the prioritisation of AF in its region.

The QIPP Programme on AF has multiple objectives. It aims to introduce pulse palpation into acute, primary and community care setting and thus to increase the chances of early diagnosis for the Surrey population.

It also targets improved community access to ambulatory electrocardiogram diagnostics and their expert interpretation. It is hoped that in doing so, the diagnosis rate of paroxysmal AF and other cardiac arrhythmias will improve.

Furthermore, while trying to improve the anticoagulation services in general, the programme aims to facilitate a universal roll-out of the GRASP-AF tool across NHS Surrey’s 137 GP practices and to identify those AF patients that could benefit from being newly commenced on anticoagulation.

Finally, the programme aspires to keep all the GPs in the region updated on what constitutes the best practice on the management of AF. In support of this programme, Surrey Heart and Stroke Network provide free GP training on AF and heart failure.

In implementing the network’s QIPP plan, NHS Surrey identified the detection and management of AF in order to prevent stroke as one of the top three long-term conditions in QIPP programmes that Clinical Commissioning Groups (CCGs) are being supported in implementing. The CCG leads are in turn working with their own practices to encourage them to sign up to these different initiatives. Even though there is a variation in acceptance on the part of the CCGs, most of them are undertaking some effort to improve their AF diagnosis and management.

Surrey Heart and Stroke Network receive national funding to improve the management of cardiology conditions and stroke in Surrey. A small part of this budget is allocated for AF. This is being used to fund a dedicated data support worker who runs GRASP-AF in GP practices, educational updates for GPs and continuing a palpitations care pathway pilot.

"In support of this programme, Surrey Heart and Stroke Network provide free GP training on AF and heart failure."

For more information on the QIPP Programme initiative please contact Ms Liz Patroe at liz.patroe@surreypct.nhs.uk.
Random pulse checks and patient self-monitoring are some of the most effective ways of discovering undiagnosed cases of AF. Realising that one does not need to be an expert cardiologist to raise awareness of AF and to carry out a pulse check, the Prescribing Support Team from Wolverhampton PCT set upon an ambitious project to deliver public health advice on AF in the Community Pharmacy setting. In extending AF screening to local pharmacies, this project provides a great opportunity to reach people that might not regularly attend their GP practice.

As part of this project, the Prescribing Support Team provides their local pharmacists with AF as well as training them to carry out pulse checks. The pharmacists are then able to utilise their newly acquired skills as part of the pulse check campaign whereby they are able to check a patient’s pulse, to teach a patient to check their pulse on their own and to refer them to their GP if appropriate. In order to attract public attention and to educate their customers about AF, the pharmacies were supplied with specially designed posters and patient education leaflets.

This project was funded from the local public health campaign’s budget and the only costs incurred were a small donation to the Arrhythmia Alliance which covered the costs of printing and postage of promotional materials.

The Prescribing Support Team will be evaluating feedback from the pharmacists that took part in this campaign in order to determine if anything could be done to improve any future campaigning efforts.

This campaign has great potential to reach out to people who do not often visit their GP and to generate considerable efficiency savings through the prevention of costs associated with late AF diagnosis and subsequent complications.

For more information on the Pulse Checks in Community Pharmacies initiative please contact Ms Riva Eardley on 01902 575 184 or at riva.eardley@wolvespct.nhs.uk.
The *Strike at Stroke Anticoagulate!* initiative was launched across all six PCTs that fall within the area covered by the AGWS Cardiac Network; an area with a population of 2.8 million. Its aim is to improve anticoagulation service for AF in order to prevent AF-related strokes. It has been shown that anticoagulants reduce the risk of stroke in AF patients by as much as sixty-two per cent. The local GPs were therefore incentivised to review their AF patients who had a high risk of stroke and then to offer anticoagulation through Warfarin prescribing, wherever appropriate. As a result of this targeted incentive programme the AGWS Cardiac and Stroke Network currently has the highest numbers of patients audited using the GRASP-AF tool in the country, as well as the highest numbers of new patients receiving anticoagulation.

Prior to embarking on the network-wide *Strike at Stroke Anticoagulate!* initiative, a pilot project was carried out looking at AF detection and management in patients over the age of sixty-five in North Somerset GP practices. This pilot sought to increase the detection of AF using pulse checks and audit anticoagulation treatment in known AF patients. From the data obtained through this pilot it was clear that despite a significant increase in the number of newly-identified patients, there was only a very small increase in the number of them receiving anticoagulation. The network therefore assumed the responsibility of promoting optimal medical management of AF, with anticoagulation at its centre.

In 2010, the *Strike at Stroke Anticoagulate!* initiative was extended across the network with the aim of increasing the number of high-risk AF patients (CHADS>1) being offered anticoagulation. The GPs were therefore incentivised to run the GRASP-AF tool to assess existing AF patients and, where appropriate, actively review treatment with a view to increasing levels of anticoagulation. The GPs responded enthusiastically to this project, and with 18,498 AF patients registered in 122 participating practices the network was able to build a significant body of information about AF, its prevalence and incidence, and about how far it is from achieving optimal levels of treatment.

Significantly, the network oversaw a total of 322 patients converted to Warfarin. This translates into thirteen strokes that were potentially avoided by the programme, delivering a saving of £262,000 to the NHS, according to the National Audit Office’s modelling of stroke care provision.

The *Strike at Stroke Anticoagulate!* programme was directly funded by the AGWS Cardiac and Stroke Network through an investment of £50,000 in the project. The funding was used to promote patient reviews by GPs and to run educational events to raise awareness of AF, the risk of stroke and the role of anticoagulants in the prevention of stroke.

For more information on the *Strike at Stroke Anticoagulate!* initiative please contact Ms Sunita Berry on 0117 342 0462 or at sunita.berry@uhbristol.nhs.uk.
Arrhythmia Nurses

Ms Angela Griffiths, Ms Tara Meredith, Dr Tim Betts, Dr Kim Rajappan, Dr Yaver Bashir
Cardiac Rhythm Management Team, John Radcliffe Hospital

Key Points:
- Provision of clinical support to patients with a variety of arrhythmias
- Link between primary and secondary care specialists
- Phone clinic to provide advice and support in hard-to-reach locations
- Educational support for patients as well as professionals
- Technical support in catheter ablation procedures
- Ability to see more patients

The Cardiac Rhythm Management Team established nurse-led arrhythmia clinics in order to meet three objectives. It set out to establish a multidisciplinary team capable of providing clinical support for patients with a variety of arrhythmias, to improve patient information and education, and to act as a link with primary care health professionals.

The nurse-led arrhythmia clinics run alongside consultant clinics and operate a telephone clinic to ensure that patients living in remote areas can benefit from the same level of advice and support.

The arrhythmia nurses also participate in local and national education programmes for healthcare professionals, and provide technical support in catheter ablation procedures – a role traditionally only carried out by cardiac physiologists.

With the specialist nurses’ salaries representing the entire cost of this service, its potential economic benefits are multiple. As the specialist nurses assess and prepare patients for complex procedures, the healthcare professionals who would do this in other hospitals have more time to do other things such as see patients in out-patient clinics. This increases the service’s capacity and reduces waiting list times. In addition to offering immediate advice, the nurse-delivered telephone consultations are more cost-effective than having to refer patients back for consultant out-patient clinic appointments.

The most important benefits are, however, intangible and impossible to value: having a single individual who can provide care throughout the patient pathway and who provides a single point of contact for this specific patient group.

“The most important benefits are, however, intangible and impossible to value: having a single individual who can provide care throughout the patient pathway and who provides a single point of contact for this specific patient group.”

For more information on the Arrhythmia Nurses initiative please contact Ms Angela Griffiths on 01865 228 994 or at angie.griffiths@orh.nhs.uk, or Tara Meredith on 01865 228 994 or at tara.meredith@orh.nhs.uk.
Ablation
A treatment which destroys a very small area of tissue inside the heart and so works to prevent rogue electrical impulses from interfering with the regular rhythm of the heart

Anticoagulant/Anticoagulate
Drug therapy which helps to slow the natural clotting speed of the blood

Antithrombotic treatment
Treatment which reduces the risk of a blood clot forming which could lead to a stroke

Arrhythmia
Heart rhythm disorder

Atrial Fibrillation (AF)
Irregular heart rhythm

Atrial Flutter
A heart rhythm disorder in which the upper chambers of the heart beat very rapidly

BMI
Body Mass Index

Cardiac
Relating to the heart

Cardiovascular
Relating to the heart and blood vessels

Cardioversion
A therapy to treat Atrial Fibrillation or Atrial Flutter which uses electrical shocks to revert the heart back into a regular rhythm

CHADS2 /CHADS2VASc
A method of assessing stroke risk in patients with Atrial Fibrillation: Congestive heart failure Hypertension Age (75 years or over) Diabetes Stroke Vascular disease Age (65 – 74 years) Sex (gender)

CV Specialist
A cardiovascular specialist

Echocardiogram (Echo)
An image of the heart using soundwave-based technology (ultrasound) which shows a three-dimensional image

Electrocardiogram (ECG)
A representation of the heart’s electrical activity taken from electrodes on the skin surface

HASBLED
A method of assessing bleeding risk in AF patients on anticoagulation being considered for anticoagulation: Hypertension Abnormal renal/liver function Stroke Bleeding history/predisposition Labile INR (measure of blood coagulation) Elderly (over 65 years) Drugs/alcohol

Heart failure
The inability (failure) of the heart to pump sufficient oxygenated blood around the body to meet physiological requirements

Hypertension
High blood pressure – a condition that puts strain on the heart, leading to thickening of the heart muscle and increased size of the left atrium. This condition is associated with AF
Palpitations
A sensation in which the person is aware of a rapid, irregular or hard heartbeat. It can appear to skip beats or thump in the chest

Paroxysmal AF
Episodes of Atrial Fibrillation which cease without treatment

Physiologists
A healthcare professional who performs diagnostic and analytical procedures to assess heart rhythm disorders

QIPP
Quality, Innovation, Productivity and Prevention for a large scale transformational programme for the NHS aimed at improving quality of care and efficiency

Stroke
A medical condition where the brain is deprived of oxygen due to a blockage or a bleed

Thrombo-embolic
The blocking of a vessel by a blood clot

Transoesophageal echocardiogram (TOE)
A procedure carried out to see whether clots have formed in the left atrium and so whether a treatment option is safe to perform

Urinalysis
A range of tests performed on urine

Warfarin
A medication used to anticoagulate the blood
The Atrial Fibrillation Association (AFA) is a UK registered international charity which focuses on raising awareness of AF by providing information and support materials for patients and medical professionals involved in detecting, diagnosing and managing Atrial Fibrillation.

AFA works closely with medical professionals, the Department of Health, Government, NHS Trusts, PCTs, patients, carers, patient support group members and allied groups.

All information booklets published by AFA have been approved by an AF medical panel and endorsed by the Department of Health. AFA has published nine patient information booklets, two AF Checklists and thirty-three AF Fact Sheets, many of the titles are now available in twelve languages and AFA-International is growing throughout the world, from Australia and the Asia Pacific to the United States and many parts of Europe.

Furthermore, AFA is also involved in the collection of the most up-to-date data on AF services in the NHS and represents a valuable source of statistical information for researchers. If you require any AF-related data; including a recent nationwide review of ablation services, please contact Trudie Lobban at the address below.

**AFA aims to:**
1. Provide support and information on AF to those affected by this condition
2. Advance the education of the medical profession and the general public on the subject of AF
3. Promote research into the management of AF

**Contact Details:**

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