HEALTHCARE PIONEERS
SHOWCASING BEST PRACTICE IN AF
Supported by the All-Party Parliamentary Group on Atrial Fibrillation (APGAF)
April 2015

www.afa.org.uk
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Foreword

I am delighted to present the 2015 Healthcare Pioneers report, which has been developed by the AF Association and endorsed by the All-Party Parliamentary Group on Atrial Fibrillation (APGAF). This report identifies best practice in the diagnosis, treatment and care of patients with atrial fibrillation (AF) and I’d like to thank everyone who has been involved with this process.

AF is the most common sustained arrhythmia and is associated with deadly and hugely debilitating consequences including AF-related stroke, heart failure, reduced quality of life and premature death. It is estimated that AF currently affects around 1,250,000 people in the UK, which amounts to nearly 2% of the UK’s population. The numbers of patients being diagnosed with AF are increasing and it is predicted that this figure could double by 2050.

All too often we see AF being poorly managed. Many thousands of patients do not receive the anticoagulation they require and incapacitating symptoms are often under-treated or even ignored. It is imperative that AF is rapidly detected and appropriately managed, in order to reduce the high number of preventable AF-related strokes in England and Wales each year.

This is why the AF Association launched the ‘Detect, Protect, Correct’ AF campaign; the case studies within this report are great examples of how best these aims can be achieved.

This report serves as an update to the 2011 edition of Healthcare Pioneers, which focussed on innovation and best practice in AF care. This report was a great success and we have now asked Clinical Commissioning Groups and clinicians from across England and Wales to submit examples of what they believe represents excellence in AF services. From these submissions an expert judging committee, made up of prominent clinicians, has identified what best practice in AF diagnosis, treatment and care looks like.

The case studies in this report are excellent examples of innovative, efficient and effective AF services. I would urge commissioners across the NHS to take note of the case studies included in the report, and use them as a benchmark to drive improvement in their own processes for the diagnosis, treatment and care of AF patients.
As Chair of the All-Party Parliamentary Group on Atrial Fibrillation (APGAF) I would like to thank everyone who submitted to this report. We hope this public recognition will help promote innovation in AF services across the country.

As someone with first-hand experience of AF, I fully recognise the need to ensure improvement in the diagnosis, treatment and care of AF patients. The All-Party Parliamentary Group plays an important role in helping ensure AF patients receive the care and treatment that is most appropriate for their condition, and this report demonstrates how, when carried out correctly, this can be delivered efficiently and effectively at a local level.

The case studies in this report provide examples for others to draw on in delivering exceptional and effective care for AF patients. I would encourage commissioners to take the time to look through this booklet, read the case studies, and see if there is anything they could take back to their local area to improve on how they deliver their services. Even small changes made as a result of learning points taken from this booklet could make a significant difference to the life of AF patients and prevent undue stress, AF-related stroke and possibly death.

GLYN DAVIES MP
CHAIR, ALL-PARTY PARLIAMENTARY GROUP ON ATRIAL FIBRILLATION
Spreading Local Innovation

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Primary Care Atrial Fibrillation (PCAF) Service

Dr Dhiraj Gupta & Dr Moloy Das (Liverpool Heart and Chest Hospital NHS Foundation Trust) and Inspira Health Solutions Ltd.

THE PCAF SERVICE IS AVAILABLE ACROSS THE UK

The Primary Care Atrial Fibrillation (PCAF) service was first launched in Merseyside in June 2012 by Inspira Health Solutions in collaboration with clinicians at Liverpool Heart and Chest Hospital. It is an innovative consultant-led pathway that provides expert hospital-based resources within GP practices with the aim of improving the provision of anticoagulation treatments among high-risk AF patients.

The service was developed in response to the fact that AF-related stroke-risk can be significantly reduced through appropriate treatment but, as NICE have estimated, 46% of patients that should be anti-coagulated are not. The service is available nationwide and was delivered within 42 CCGs across England in 2014, and has been delivered in 2 Local Health Boards in Wales.

The service comprises four phases:

1. In phase one, a comprehensive case note review is undertaken of all patients who are not already on the AF register but have been identified as possibly having AF based on Read code triggers such as abnormal electrocardiogram (ECG), irregular pulse or a prescription for digoxin. Where required, patients are referred for investigations to confirm the diagnosis.

2. In phase two, using a range of PRIMIS audit tools such as GRASP-AF, high risk patients (CHA2DS2_VASC >1) who would benefit from a formal review are identified, including those patients on warfarin with a sub-optimal time-in-therapeutic range (TTR).

3. Phase three sees an administrator send out invitation letters and information to patients, inviting them to review. They are also contacted by telephone one week before, and then again one day prior to their appointment, to minimise non-attendance.

4. In the final phase, AF and anticoagulation assessment clinics are delivered within the patients’ GP practice and led by a consultant cardiologist or consultant stroke physician from secondary care. The patients’ condition and treatment is reviewed alongside their primary care healthcare team and, where appropriate, anticoagulation treatment is prescribed.

In a sub-set of data including 56 GP practices, with a patient population of 386,624, a total of 1063 previously untreated high risk patients attended for review and were offered anticoagulation. Of these, 55% were prescribed a NOAC, 41% were prescribed warfarin whilst 4% declined anticoagulation.

It is estimated that these increased treatment rates have prevented over 30 AF-related strokes per year.

This strategy has two distinct advantages. Firstly, patients currently managed solely within primary care are reviewed and, where appropriate, their anticoagulation treatment is optimised. Secondly, the educational legacy left within the GP practice following completion of the PCAF pathway enables such optimal treatment to be carried forward for future patients.

For more information on the PCAF Service, please contact Lee Panter on 0151 244 3275 or at lee@inspirahealth.co.uk
Aspiring to Clinical Excellence (ACE) WINTER: Screening Programme

Sapna Shannon, 
Head of Primary Care Development 
BIRMINGHAM CROSSCITY CCG

Birmingham CrossCity CCG acknowledged the scale and severity of AF as a leading cause of morbidity and mortality. As part of its commitment to improving the quality of care delivered by its member GP practices to its population, it initiated a quality improvement programme during the winter of 2013-2014, called ‘Aspiring to Clinical Excellence (ACE) WINTER’ in which screening for AF was one of the deliverables to be broadened.

The aim of the programme was to facilitate early diagnosis of AF across the CCG’s population through opportunistic screening within primary care and thereby reduce the incidence of AF-related stroke.

People above the age of 65 attending a clinic for flu vaccination who had no previous diagnosis of AF were offered opportunistic screening for AF.

Screened patients had their pulse taken for a minimum of 20 seconds and where an irregular pulse was found, appropriate investigation and treatment was initiated. Clinicians used an electrocardiogram (ECG) to confirm the presence of AF. Practices then followed local pathways for accessing echocardiogram investigations and performing a CHA2DS2-VASC assessment (a method of assessing stroke risk in patients with AF).

Across the 81 practices that participated in the ACE WINTER programme, the prevalence of AF increased. The higher prevalence rate suggests that the ACE WINTER programme contributed to early or increased AF diagnoses. The year-on-year prevalence was 3.8% higher with an additional 312 patients being added to local AF registers.

Encouraged by the higher prevalence figures and the potential healthcare and cost benefits, the CCG extended the screening programme for 2014/15.

For more information on Birmingham Cross City CCG’s programme, please contact Sapna Shannon on 0121 255 0579 or at sapna.shannon@nhs.net

Key Points

- Early diagnosis of AF across the CCG population through a programme of opportunistic screening within primary care
- Primary objective to increase the detection of new cases of AF compared to routine practice and thereby reduce the incidence of AF-related stroke
- Increase in AF prevalence in the 81 practices that participated in the ACE WINTER programme
- Year-on-year prevalence 3.8% higher with an additional 312 patients being added to AF registers of these practices
- CCG screening programme extended for 2014/15
Opportunistic Screening For AF During Flu Clinics

Nichola Arathoon, Dr Craig Wakeham and Dr Karen Kirkham
NHS DORSET CCG

Dorset CCG sought to identify patients with previously undiagnosed AF and ensure that individuals identified through screening were aware of the risk of suffering an AF-related stroke. Six out of eight GP practices in the Dorset locality of Weymouth and Portland took part in an initiative to reduce the risk of AF related stroke by screening patients over the age of 65 for AF during flu clinics. Dorset CCG also sought to offer effective anticoagulation therapy to at risk patients, with regular review.

From September to December 2013, 6,000 patients were screened (50% of 65+ year olds). Patients were offered a pulse check whilst attending a clinic to receive a flu injection.

If an irregular pulse was detected, an ECG was performed to ascertain the type of arrhythmia and appropriate treatment begun. During the pilot, 150 patients received an ECG (2.5%), with 22 patients diagnosed with AF (0.3%).

Of those diagnosed, 20 were then initiated on an oral anticoagulant (warfarin). Dorset CCG aimed to ensure that no more than 25% of patients were contraindicated for, or refused, anticoagulation. This has been monitored via use of the GRASP-AF tool.

With an estimated cost of £383 per patient undergoing anticoagulation therapy with Warfarin, Dorset CCG estimated a cost saving of £238,000 - assuming 20 people over 10 years would have a stroke. It was estimated that for every £1 invested in healthcare, there was a £225 saving.

The outcomes and lessons learned from the 2013 pilot have enabled the development of a service specification for ‘Opportunistic screening for atrial fibrillation during flu clinics and anticoagulation for the prevention of AF-related stroke’ for GP practices within NHS Dorset CCG. Funding has also been identified to enable this specification to be implemented in 2015.

The service also tried to embed pulse checks into everyday practice. This scheme received good feedback. Patient evaluation demonstrated that 82% of patients would recommend that their family or friends should have their pulse taken whilst attending a flu clinic.

Following the 2013 pilot, 70 practices (70%) across Dorset signed up to provide this service in 2014. Of note, 100% of practices in the pilot locality delivered the service in 2014.

The aims of the 2014 service:

- Performing a pulse check on 65,000 patients
- Performing 1,625 ECGs
- Diagnosing approximately 200 patients with AF
- Ensuring at least 75% of patients with AF are appropriately anticoagulated
- Saving social care costs for avoidable AF-related strokes in Dorset.

For more information on NHS Dorset CCG’s programme, please contact Nichola Arathoon on 01305 368912 or at Nichola.Arathoon@dorsetccg.nhs.uk
As part of an innovative service-delivery strategy, NHS Herefordshire CCG partnered with Apodi Healthcare and local GP practices to deliver better patient outcomes through the Stroke Prevention in Atrial Fibrillation Integrated Care Clinic (SPAFICC) Programme. SPAFICC is a patient-centred programme which identifies high risk patients and provides appropriate treatment following consultation with a specialist clinician. The programme is funded by Bayer Healthcare, under a MEGS agreement.

Under the programme, the GRASP-AF tool was used to identify high-risk patients. Those identified with a CHA2DS2 VASc score of 2 or more were invited to attend a local clinic with their carer. Under SPAFICC, local specialist clinicians, working to national guidelines and local care pathways, supported primary care-based clinicians.

High-risk patients were initiated on an oral anticoagulant whilst those already receiving an oral anticoagulant, such as warfarin, were assessed for compliance and the stability of INRs to ensure optimum TTR. The recommendations of this assessment were then shared with the patients and their own GPs for future action.

The service empowered patients via a process of supported self-management. This promoted choice and increased patient involvement in the decision-making process regarding their treatment. Patient-reported experience measures confirmed a high level of satisfaction.

Delivery of the SPAFICC Programme led to an increase in oral anticoagulant prescribing, in line with NICE guidance. As of April 2015, 1151 patients had attended a nurse-led education session (flexible to a patient’s preferences and needs) and an individual review. Of these, 426 patients (37%) went on to attend an additional medicine optimisation review.

The programme has also brought benefits to the local practices, giving clinicians enhanced skills as well as the confidence to initiate and manage oral anticoagulants in primary care. It has also improved understanding of the latest guidelines on anticoagulation in AF.

Overall, there has been collaboration across the whole CCG to achieve greater consistency in AF management and further reduce AF-related stroke risk.

For more information on NHS Herefordshire CCG’s programme, please contact Dr Ritesh Dua or Jacinta Meighan-Davies on 01432 383778 or at Jacinta.meighan-davies@herefordshireccg.nhs.uk
Streamlining the Management of Atrial Fibrillation through a Nurse Managed Community Outreach Arrhythmia Service

Prof Nick Linker, Consultant Cardiologist & Jayne Mudd MBE, Nurse Consultant in Cardiac Rhythm Management
SOUTH TEES HOSPITAL NHS FOUNDATION TRUST

The South Tees community arrhythmia service was established in 2007 with the dual purpose of managing demand for arrhythmia services (to meet national waiting time standards) and delivering on the NSF and NICE standards, relating to arrhythmia care. The community arrhythmia service demonstrated rapid success in achieving its established aims and objectives, within the first few months of operation of the service and has continued to develop and expand across the South Tees and North Yorkshire catchment areas. Approximately 1050 patients per annum are now managed within the community rather than the hospital setting. Although the service accepts referrals for patients with a variety of arrhythmias, a large proportion of patients (approximately 65%) managed within the service have atrial fibrillation. The development of this service has enabled us to streamline the pathway for this patient group improving access to specialist services within their own locality.

Specialist arrhythmia nurses working within the cardiac rhythm management team based within the tertiary centre provide an outreach service through community based clinics. The nurses all complete an in house competency based training programme and are all qualified to at least MSc level which includes clinical assessment, non-medical prescribing and arrhythmia management modules. The patient pathway is consultant led with clinical supervision and advice regarding patient care being provided by the CRM consultant. Time is allocated in the consultant job plan for the nurses to discuss patient management plans once they return to the hospital.

The team provide a responsive service for GP referrers and their patients, offering rapid assessment of patients’ clinical condition and needs, through a one stop shop model. Facilities are available to offer diagnostic testing such as ambulatory ECG monitoring and echocardiogram at first assessment or review as required. A patient help line is also in place which is manned by the arrhythmia nurse team and is available to patients and health care professionals utilising the service. This is most commonly used for advice on prescribing issues or from patients wishing to ask more questions about their condition or to inform of adverse reactions to medications.

AF-related stroke risk stratification is performed for all patients with atrial fibrillation using recommended clinical scoring systems with prompt initiation of anticoagulation as required. Audit of the service has shown that 100% of patients are AF-related stroke risk stratified and appropriately anticoagulated. 90 minute clinic slots allow adequate time for detailed discussion with the patient regarding this, as well as for assessment and investigation. The team provide education for patients and for health care professionals accessing the service. This has been particularly useful following the introduction of the novel oral anticoagulants (NOACS).

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Education sessions provided by the nurse team within GP practices along with the development of a NOAC information sheet has led to increased confidence in prescribing these drugs in the primary care setting as well as highlighting the need for opportunistic pulse checking, AF-related stroke risk stratification and anticoagulation in general.

The service also allows for fast-tracking of patients to secondary care who require more specialist procedures such as cardioversion/catheter ablation whilst allowing patients with less troublesome atrial fibrillation to be managed within primary care. Patients who require onward referral to the tertiary centre can be directly listed for procedure following discussion with the consultant cardiologist. Audit has shown that 95% of patients with less complex needs are effectively managed within the community setting without the need for hospital attendance.

The service ensures equity of access for patients relating to clinical need and avoids unnecessary hospital appointments. It enables the local community to make effective use of scarce resources and clinical expertise, thereby reducing patient waits, providing prompt assessment, diagnosis and management, whilst releasing consultant time to see more complex patients. Patient satisfaction is high with 95% of patients preferring to be seen in the community service rather than the hospital.

For more information on South Tees Hospital NHS Foundation Trust’s programme please contact Jayne Mudd MBE at jayne.mudd@stees.nhs.uk
A multidisciplinary approach to adopting and utilising the GRASP-AF tool

Jean Hayhurst, Clinical Project Manager
NHS BLACKPOOL CCG

In 2009, NHS Blackpool was advised by the National Support Team for Health Inequalities to consider taking steps to address their higher-than-national-average premature mortality rate for Cardiovascular Disease. A recommended step was to improve anticoagulation treatment for patients with AF over the age of 65.

In Blackpool a Locally Enhanced Scheme was launched to promote screening for AF through manual pulse checks. The GRASP-AF tool was considered to be ideally placed to support practices in validating their AF register and identifying patients for whom AF-related stroke prevention treatment could be improved.

However, despite the level of information it provides, the GRASP-AF tool was seen as a difficult tool to use both from a technical and clinical perspective. Yet the joint efforts of Blackpool’s informatics team and a cardiovascular specialist nurse meant that practices were able to overcome adoption difficulties, where practices had previously believed the tool was “too complex and time-consuming” to use.

Technical support in installing the tool onto practice systems, running the searches and uploading the results onto the national database was provided to Blackpool practices by the former Primary Care Trust (PCT) Informatics Development team. Thereafter they continued to assist the practices in running the tool on a quarterly basis.

The practices were visited and provided with an information pack that had been developed in conjunction with Lancashire and South Cumbria Cardiac and Stroke Network. This contained supporting documents for clinicians, particularly in relation to stroke prevention in AF. The practices were also invited to attend education and training sessions, which were jointly delivered by a Cardiovascular Specialist Nurse and a Medicines Management Adviser.

Training sessions have been provided for clinicians and were arranged in 2014 on a neighbourhood basis - delivered in the large Primary Care Centres which proved more accessible.

In addition, following each run of the tool, the practices were provided with a summary report of any progress they had made with their work in the interim.

Encouraging the practices to actually act upon the reports was also a challenge as this was once again time consuming. The Practice Pharmacists have more recently been identified as being ideally placed to undertake the review work; more support has been provided to them in relation to using the filters within the tool to prioritise and thus lessen their workload.

The tool continues to be run remotely on a quarterly basis by the Lancashire and Midlands Commissioning Support Unit and further training sessions were arranged and delivered in 2014.

In the first year of running the AF Screening LES and the GRASP-AF tool, AF prevalence in Blackpool increased from 1.60% to 1.75%, with warfarin prescriptions increasing by 19%.

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However, whilst the practices had been very proactive in finding more AF patients and adding them to the register, they had not been as proactive in prescribing anti-coagulation treatment, hence the number of high risk AF patients either on aspirin or no treatment also increased. To overcome this, more guidance and education was provided and results in June 2014 illustrated an AF prevalence of 2.24% and an increase in warfarin prescription from 40.51% (2011) to 63.27% (2014).

The incidence of AF-related stroke reported by the local acute trust has not reduced but it has also not increased. The increase in AF prevalence and increase in warfarin prescription also led to a review of the local Anticoagulation Dosing Advisory Service (ADAS) and the outcome of this, in addition to further investment, was a revised service specification, an identified tariff for the service and the development of a Primary Care Information pack.

It has to be said that the work undertaken by NHS Blackpool would not have been as effective had it not been for the co-ordinated efforts of the Informatics Development team and clinical colleagues; between them they were able to support practices both technically and clinically; furthermore, the practices have now embedded AF detection and stroke prevention into their daily routines. The Practice Pharmacists have had the AF project incorporated into their work stream to reflect this CCG priority.

Further work has been done recently to reflect the changes within the revised NICE guidance for AF which has linked into the work of the Lancashire Medicines Management Group.

Further support has been offered to the Practice Pharmacists who are in many instances “championing” the patient review work. Use of the Warfarin Patient Safety Tool and “user friendly” prompts for use with GRASP-AF are projects that the Clinical Commissioning Group is working on with the backing of the Commissioning Support Unit.

For more information on the Atrial Fibrillation Screen Locally Enhanced Scheme please contact Jean Hayhurst on 01253 951200 or at jean.hayhurst@blackpool.nhs.uk
Atrial Fibrillation Association

The Atrial Fibrillation Association (AF Association) 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.

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

All information booklets published by AF Association have been approved by an AF medical panel and endorsed by the Department of Health. AF Association has published twelve 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 to various countries across the Asia Pacific region, the United States and many parts of Europe.

AF Association also organises annual events for healthcare professionals involved in the management and treatment of arrhythmias, such as atrial fibrillation. These meetings include our regional Cardiac Update Meetings and our annual conference Heart Rhythm Congress (HRC) – www.heartrhythmcongress.org. These events provide a platform for education as well as sharing best practice and information on the latest topics. As well as this they also provide an opportunity to network with healthcare professionals in all areas of cardiac provision, academic institutions and professional bodies.

Furthermore, AF Association 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, or would like to contribute to developments in the clinical management of AF, please visit www.heartofaf.org or please contact Trudie Lobban MBE FRCP (Edin), AF Association Founder and CEO, at the address to the right.

AF Association 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

AF Association is affiliated to Arrhythmia Alliance (www.aa-international.org). The charity is proud to support World Heart Rhythm Week (www.heartrhythmweek.org), an international campaign dedicated to raising the profile of arrhythmias, including AF.

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APGAF

On 8 June 2011, the All-Party Parliamentary Group on Atrial Fibrillation held its inaugural meeting in Parliament. It was agreed at the meeting that the aim of the group would be:

"To raise awareness of the issues affecting patients diagnosed with atrial fibrillation (AF), and work to ensure the diagnosis, care, treatment, management, and research of AF is a priority for the NHS."

For more information, please see the Parliamentary register at: http://www.publications.parliament.uk/pa/cm/cmallparty/register/register.pdf
**Glossary**

**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 /CHA₂DS₂ VASc**
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 or 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
Glossary

**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 if 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
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Trudie Lobban MBE FRCP (Edin)

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