IN PURSUIT OF EXCELLENCE IN THE PREVENTION OF AF-RELATED STROKE

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Report content developed from a multi-stakeholder meeting in 2015, hosted by the AF Association and chaired by Professor Martin Cowie, Imperial College London, and in follow-up with experts after the meeting.

Meeting attendees and report contributors include:

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FOREWORD

With an ageing population, atrial fibrillation (AF), a common cardiac rhythm disorder, is increasing\(^1,2\) and will only continue to do so. As one of the biggest independent risk factors for stroke,\(^3\) as well as the fact that AF-related strokes are more severe,\(^4,5\) inappropriate management of this condition can have devastating consequences. While we have come a long way in awareness, detection and management of this condition, it cannot be ignored that more needs to be done to ensure optimal protection for patients against AF-related stroke.\(^5\)

It is estimated that the true number of people living with AF in England is over one million, including around 250,000 living with undiagnosed AF.\(^6\) Therefore, it is essential that appropriate screening methods and activities are in place to identify those with AF, make a complete diagnosis and implement appropriate care.\(^5\) Yet, even following a diagnosis of AF and accurate assessment of stroke risk, the patient pathway to appropriate anticoagulation is fraught with challenges, leaving over half of diagnosed AF patients not on anticoagulation\(^7\) and exposed to the risk of AF-related stroke.

With the updated NICE clinical guideline on the management of atrial fibrillation published in June 2014, there is a spotlight on the importance of appropriate management of AF patients. The guidance suggests that non-vitamin K (“novel”) oral anticoagulants (NOACs) should be an option for stroke prevention in such patients, and that aspirin should not be offered solely for the prevention of AF-related stroke. Yet, in practice these recommendations are often not happening, which is unacceptable.

I am therefore pleased to introduce the In Pursuit of Excellence in the Prevention of AF-Related Stroke report. This report captures insights and discussion from a multi-stakeholder group, generated as part of a roundtable meeting and through follow-up with experts, to assess the current situation for the management of AF patients in England, including challenges to optimal care, best practice examples and practical solutions.

Over the following pages you will find an overview of the impact of AF-related stroke, and a look at the current situation around uptake of NOACs in England, including variance across the country due to local barriers and challenges. Importantly, you will also find good examples of best practice where individuals, practices, groups and others are implementing strategies and activities which strive for the best AF patient care possible. Key transferable elements and learnings have been drawn out of these examples for practical application, supported by identification of remaining misperceptions that are currently challenging optimal AF patient care. Throughout the report you will see quotes from the meeting attendees and contributors.

While we have come a long way, and there are many championing quality care, there remain thousands of AF patients needlessly suffering an AF-related stroke, that may kill them or leave them disabled for life. This situation needs to change, and it is critical that all individuals involved in the AF patient pathway strive to take patient care from good to excellent, to ensure AF patients and those around them are protected from the devastation of AF-related stroke.
THE TRUE PRICE OF AF-RELATED STROKE

Without preventative action there is likely to be an increase in the incidence of stroke as the population ages. Stroke is one of the top causes of death in England, and even those who survive often need care for some time after their stroke and potentially the rest of their lives.\(^8\) The devastating impact also extends beyond the sufferer, putting significant emotional and financial strain on those around them.\(^8\)

Atrial fibrillation (AF) is the most common cardiac rhythm disorder\(^1,9\) and a major risk factor for stroke.\(^8,10,11\) It increases the risk of a clot developing in the heart, which may then get pumped into the general blood circulation and travel to the brain, where it can block arteries, causing a stroke.\(^4,9,12\) AF-related strokes are also more severe, with greater disability and mortality than strokes not attributable to AF.\(^2,4\) The risk of AF-related stroke is greatly reduced with appropriate anticoagulation.\(^5,10,13\) Yet, many AF patients remain undiagnosed, and even those diagnosed may remain unprotected against AF-related stroke.

### Burden of stroke

- Stroke is one of the top three causes of death and the largest cause of adult disability in England\(^8\)
  - Around one in four people who experience stroke will die as a result\(^8\)
  - Around half of those who do survive a stroke will be left dependent on others for everyday activities\(^8\)
  - Around 300,000 people are living with moderate to severe disabilities as a result of stroke\(^8\)
  - Stroke is more common in men than in women, but women who suffer a stroke are more likely to die of it\(^8\)

- It is estimated that stroke costs the economy around £8 billion a year, which includes a cost of over £3 billion to the NHS\(^8\)

### Relationship between AF and stroke

- AF is a powerful independent risk factor for stroke,\(^1\) increasing risk by around 500%\(^10\)
  - Approximately 12,500 strokes a year are thought to be directly attributable to AF\(^8,10\)

- AF-related stroke is also often more severe than in people without AF including longer stays in hospital, greater disability, higher rates of recurrence and mortality\(^2,4\)

- Of those AF patients experiencing a stroke, 4,300 will die in hospital and 8,500 will die within the first year following the stroke\(^14\)

- Healthcare costs in the first year of care following an AF-related stroke are estimated to be up to £11,900\(^10\)
AF picture in England

• Around 835,000 people in England are known to have AF.

• However, it is estimated that there may be another 250,000 living with undiagnosed AF, so the true number of those living with AF could be over one million.

• Prevalence of AF increases with age, occurring in around 10% of people aged over 65 and 15% of people aged 75 and over.

• Between 100,000 and 200,000 people develop AF every year in the UK.

Management of AF

• There is an average delay of 2.6 years between onset of symptoms and diagnosis of AF.

• Among patients with documented chronic AF:
  
  ▶ More than a third were not aware of their diagnosis.
  
  ▶ Up to half were unaware of why they were being treated.

• Men are more commonly affected by AF than women, at a ratio of almost two to one.

• Between 100,000 and 200,000 people develop AF every year in the UK.

• An estimated 7,000 AF-related strokes could be prevented and 2,100 lives could be saved every year, if AF was appropriately managed with anticoagulation.

• Yet, over half of diagnosed AF patients are prescribed aspirin or nothing at all, leaving them unprotected against the risk of AF-related stroke.

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AF MANAGEMENT GUIDELINES IN PRACTICE

To protect more AF patients against the devastating effects of AF-related stroke, and reduce the number of preventable AF-related stroke deaths, it is fundamental that AF is detected and diagnosed in a timely manner, and that AF patients are appropriately anticoagulated.

NICE guidance on AF management

The updated National Institute for Health and Care Excellence (NICE) guideline on the management of atrial fibrillation, issued June 2014, marks the first update in eight years following the 2006 guideline.

The update takes into account the introduction of non-vitamin K (“novel”) oral anticoagulants (NOACs), and associated technology appraisal guidance for individual NOACs recommending them as therapy options. The guideline recommends that anticoagulation, including NOACs, should be offered where appropriate for AF patients.

It also makes other new recommendations building on the 2006 guidance, including the use of CHA2DS2-VASc rather than the original CHADS2 score for stroke risk stratification, and advising against use of aspirin for prevention of AF-related stroke. The publication of updated guidance reflects a greater focus on the need for appropriate anticoagulation to reduce the risk of AF-related stroke, which is of critical importance to the thousands of patients living with AF.

A look at the anticoagulation picture in England at the time of the updated guideline

Despite this renewed emphasis on the importance of appropriate management of AF patients, figures suggest that at the time of publication of the guideline, only around half of AF patients were receiving anticoagulation, despite 2006 recommendations.

It was also estimated that 22% of AF patients were being prescribed aspirin in the mistaken belief that this would reduce the risk of AF-related stroke. This equates to 200,000 AF patients in England who, along with those receiving no therapy, are exposed to the risk of AF-related stroke. Even in those AF patients estimated to be receiving anticoagulation, only 14% were receiving a NOAC, despite previous NICE technology appraisals supporting the use of individual NOACs.

While warfarin can be an effective option to reduce the risk of AF-related stroke, when patients remain within the optimal therapeutic range, there are a number of challenges for some patients including many food, drink and drug interactions, and the need for regular international normalised ratio (INR) monitoring. The NOACs overcome many of these challenges, making them appropriate alternatives for many patients.

A look at the picture since updated NICE guidance

NICE estimated that as a result of the updated guideline, the number of AF patients on anticoagulation would increase to 82%, with those on NOACs rising to 35%, and the number on aspirin falling to 2.5%. Yet, consensus from a multi-stakeholder perspective, is that while there has been some improvement, there is still a long way to go to ensure appropriate management of AF patients.

This perception is supported by results published in January 2015 from the Sentinel Stroke National Audit Programme (SSNAP), which captures the three month period following publication of the updated NICE guideline. The findings show that in patients with known AF, admitted to hospital with a stroke, approximately 59% of those were not on an anticoagulant and only 15% were recorded as having a justifiable reason for this. This indicates that over 40% of AF patients that may have been eligible for anticoagulation, had been left unprotected against AF-related stroke. While the percentage has reduced slightly from the previous quarter, offering some hope of a move towards better care and protection for AF patients, the number of those left unprotected, and who experienced a stroke, is still far too high. There was also considerable variance shown across Clinical Commissioning Groups (CCGs) in the percentage of AF patients admitted to hospital with a stroke who were on an anticoagulant.
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AF patient care in many areas appears to remain suboptimal. Without targeted or opportunistic screening for AF, considerable numbers of patients remain undetected. Of those detected, the data suggests that some people might not be consistently placed on an anticoagulant, or go without the opportunity to discuss their preferred choice – all of which goes against current recommendations set out by NICE (clinical guideline 180) and the benefits or outcomes this approach may gain.

Jane Macdonald
Director of Nursing and Improvement at Greater Manchester Academic Health Science Network

Additionally, the results show that over a third (34%) of AF patients admitted for a stroke were taking an antiplatelet only. While this has also improved by around 2% from the previous quarter, it still paints a worrying picture that AF patients are being inappropriately managed with antiplatelet drugs, such as aspirin, which is recognised as ineffective in reducing the risk of AF-related stroke.
Use of Novel Oral Anticoagulants (NOACs) across Clinical Commissioning Groups (CCGs) in England

Data in the map and table below look at the use of anticoagulants (anti-blood-clotting drugs) in all 209 Clinical Commissioning Groups (CCGs) across England. It examines the percentage of new therapies prescribed compared to warfarin – the older treatment. The new therapies are known as NOACs – Novel Oral Anticoagulants. They are used for people with atrial fibrillation, an irregular heartbeat, to reduce their risk of blood clots which can lead to stroke and to treat venous thromboembolism (blood clots).

The data comes from a project by NHS England known as the Medicines Optimisation Dashboard. The average rate of prescribing NOACs across all CCGs was found to be 16.5%, with 55% of CCGs having prescribing rates below this. The variation between the highest and lowest prescribing CCG of NOACs is 16-fold. These elements indicate there is still a long way to go to achieve optimal care, consistent for every AF patient across England.

Regional variance in anticoagulation choice

Significant variation in choice of anticoagulation can be seen based on where patients live. This is demonstrated by the anticoagulation map below (developed using data from a NHS England Medicines Optimisation Dashboard project) showing a significant variance in uptake of NOACs across CCGs. The mean rate of prescribing NOACs across all CCGs was found to be 16.5%, with 55% of CCGs having prescribing rates below this. The variation between the highest and lowest prescribing CCG of NOACs is 16-fold. These elements indicate there is still a long way to go to achieve optimal care, consistent for every AF patient across England.
Implementation of NICE guidance

Commissioners are legally required to make funding available for a drug or treatment recommended by NICE in its technology appraisal guidance, within three months of publication of final guidance, and NICE offers a range of resources to support implementation at a local level. However, NICE is not a regulator and so is unable to enforce implementation of its guidance.

While CCGs are required to make funding available, they can be flexible in how they make this happen. This can result in the patient pathway varying significantly from one CCG to another. Any additional local funding or formulary restrictions, which affect patient access to NICE recommended therapies, are almost impossible to defend (as well as being illegal) and may leave patients exposed to the risk of a life-changing or fatal AF-related stroke.

In addition to local barriers and restrictions, there can be variation within the same region or in areas next door to each other. This may be down to the various steps in the AF patient pathway where the patient may fall out of the system or receive sub-standard care which highlights the importance of looking at the whole patient pathway, including appropriate detection of AF and assessment of stroke risk. Yet, even when a patient is diagnosed with AF, and assessed as in need of anticoagulation to protect against AF-related stroke, the pathway to appropriate anticoagulation can contain a number of unacceptable barriers. This can include lack of patient understanding, lack of collaborative working, and healthcare professional misconceptions about NOACs, among other challenges.

While it can take time for guidance to be adopted in practice, it is critical that all those involved in the patient care pathway and decision making process around anticoagulation choices, strive to adhere to the recommendations set out by NICE in practice. While it is evident that attitudes are starting to change and the situation has progressed some way already, much more needs to be done to optimise AF patient care.

“While flexibility is important to account for different needs and situations, it is critical that AF patients are able to access appropriate therapies and care regardless of the area they live in.”

Angela Griffiths
Arrhythmia Advanced Nurse Practitioner,
John Radcliffe Hospital, Oxford
In Pursuit of Excellence

Why was this project implemented?
Many AF patients are seen locally in primary care so it is critical that they are managed optimally at a local level to reduce the risk of AF-related stroke. However, despite the significant reduction in AF-related stroke with appropriate management, NICE has estimated nearly half of those who should be on anticoagulation are not receiving it.

What does the project involve?
The Primary Care Atrial Fibrillation (PCAF) service is an innovative consultant-led pathway that provides expert hospital-based resources within GP practices. The aim of the service is to improve the provision of anticoagulation among AF patients, at high risk of AF-related stroke.

The service, first launched in Merseyside in June 2012, has four key steps:

- **Step 1:** Comprehensive review of case notes for patients not on the AF register who are identified as possibly having AF (where possible patients are referred to confirm diagnosis)
- **Step 2:** Using audit tools such as GRASP-AF, identification of high risk AF patients (CHA2DS2-VASc >1) who would benefit from a formal review, such as those who should be on an anticoagulant and are not, or those poorly managed on warfarin
- **Step 3:** An administrator contacts patients via telephone and letters to invite them to have a face-to-face review with a specialist
- **Step 4:** Face-to-face anticoagulation assessment clinic at the local GP surgery with the patient’s GP, and led by a consultant cardiologist or consultant stroke physician, to assess the patient and review treatment

At the consultation, appropriate patients are informed of the importance of anticoagulation, benefits and risks of therapies and different options. If the patient is willing to go on anticoagulation they are given a choice of warfarin or NOACs in line with the local formulary.

As with any new project, there were challenges to overcome in the initial stages with lack of knowledge and safety concerns around NOACs, so we spent a lot of time addressing the importance of choice and the right therapy for each patient, as well as patient education on need for protection against AF-related stroke.

The ‘Did Not Attend’ rate can also be very high with this sort of activity, which is a waste of time for the GPs and specialists who have taken half a day out of hospital. To minimise this there is a follow-up system after step three, which involves calling patients the week before and then the day before the appointment.

Patient pathways can vary significantly based on where the first contact happens, and there is often very little cross-talk between secondary and primary care. Additionally, there is an educational legacy left within the GP practice following completion of the PCAF pathway, which ensures those involved feel empowered to explain all the options to patients, particularly those newly diagnosed, on an ongoing basis, to support optimal management of future AF patients.

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**SPOTLIGHT ON BEST PRACTICE SEEKING TO PROVIDE OPTIMAL PROTECTION FOR AF PATIENTS**

When looking at solutions, it is important to remember that there are different situations and requirements that affect optimal care for the prevention of AF-related stroke. However, there are often key learnings and transferable elements that can be identified in those that are already demonstrating best practice. The following examples highlight some of those who are striving to provide excellent care around the country.

**Primary Care Atrial Fibrillation (PCAF) service, available in multiple CCGs**

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

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What results have you seen?

The implementation of this PCAF pathway approach allows for a review of those managed solely in primary care, with anticoagulation therapy optimised, where appropriate. The project has already been very successful on a number of levels and there are now 56 GP practices enrolled, covering a patient population of around 386,624.

Of the AF patients identified at high risk of AF-related stroke and not on anticoagulation, we managed to get 86% to attend the scheduled appointment as a result of the follow up calls. A total of 1,063 of these patients were offered anticoagulation and 96% agreed to be anticoagulated. The split was around 55% on NOACs and 41% on warfarin. It is also estimated that the increased treatment rates have prevented over 30 AF-related strokes a year.

Overall, while there has been some switch from warfarin to NOACs and vice versa, there have been very few cases where anticoagulation has stopped altogether for the AF patients involved.

What key learnings would you share with others looking to implement similar projects?

“It is fundamental that there are open channels of communication. This is not about one group knowing better than the other, but about joint working to get the best outcomes for patients. Involving the patient in the therapy decision ensures they feel empowered and understand the need for anticoagulation, as well as ensuring they have a therapy that works for their needs. To get buy-in from all key stakeholders in the early stages it is important to emphasise benefits that tap into their specific interests or to their day to day lives.”
Why was this project implemented?
Despite the greater risk and devastation of AF-related stroke, and emphasis on appropriate anticoagulation from NICE guidance, significant numbers of AF patients remain unprotected against AF-related stroke. Patient pathways can also be inconsistent for AF patients and many end up not receiving any, or not receiving appropriate anticoagulation.

What does the project involve?
The Stroke Prevention in Atrial Fibrillation Integrated Care Clinic (SPAFICC) programme is a patient-centred initiative. It uses the GRASP-AF tool to identify high-risk patients and invites those with a CHA2DS2-VASc score of two or more to attend a local clinic with their carer, if applicable.

For those high-risk AF patients attending local clinics who are not receiving any therapy, anticoagulation is initiated, while for those already on an oral anticoagulant, such as warfarin, compliance and stability of INR is assessed to ensure optimal time in therapeutic range (TTR). Following the assessment at these local clinics, information and recommendations are shared with the patients and their GPs to support ongoing care.

The programme seeks to empower patients and involve them in the decision making process regarding their therapy choice, via a process of supported self-management.

Local specialist clinicians support primary care-based clinicians with implementation of activity, which plays an important role to ensure choice in therapy is promoted and that clinicians based in local practices are given the skills and confidence to manage AF patients on anticoagulation.

What results have you seen?
As a result of our patient-centred approach, a high level of patient satisfaction was reported through experience measures. The programme also led to an increase in oral anticoagulation prescribing in line with NICE guidance. Additionally, as of April 2015, 1,151 patients had attended a nurse-led education session as well as an individual review, and of these patients, 426 (37%) went on to attend an additional medicine optimisation review.

There has been greater consistency in AF management which acts to further reduce AF-related stroke risk, and according to the GRASP-AF algorithm, this equates to the prevention of 8.3 AF-related strokes to date.

What key learnings would you share with others looking to implement similar projects?
“Collaboration across the whole CCG has been key to ensure successful implementation of the project, creating consistency in AF management and protecting patients against AF-related stroke.

Involving patients in the decision making process ensures patients are empowered and more satisfied with therapies and so more likely to be compliant with regimes.”
Streamlining the management of atrial fibrillation through a nurse managed community outreach arrhythmia service, South Tees Hospital NHS Foundation Trust

Professor Nick Linker, Consultant Cardiologist and Jayne Mudd MBE, Nurse Consultant in Cardiac Rhythm Management. South Tees Hospital NHS Foundation Trust

Why was this project implemented?
The South Tees community arrhythmia service was established in 2007 with the aim of managing demand for arrhythmia services (to meet national waiting time standards) and delivering on National Service Framework and NICE standards around care.

The service seeks to streamline the process for patients managed in the community setting, including approximately 65% managed within the service who have AF.

What does the project involve?
The patient pathway is consultant led, and delivered and managed by specialist arrhythmia nurses in the cardiac rhythm management team within the tertiary centre, who provide an outreach service through community based clinics. The team provides a responsive service for GP referrers and their patients, offering a rapid assessment of patients’ clinical condition and needs. A patient help-line is also available which is manned by the arrhythmia nurse team, allowing patients to ask questions about their condition among other things.

As part of the service, AF-related stroke risk stratification is performed for all patients with AF, and prompt initiation of anticoagulation takes place as appropriate. Duration of clinic slots is 90 minutes to allow for detailed discussion with the patients about their condition, and assessment of appropriate anticoagulation.

Ongoing patient and healthcare professional education is also available for those accessing the service. This includes educational sessions led by the nurse team within GP practices, using a NOAC information sheet, to increase clinician confidence in prescribing NOACs, as well as highlighting the need for opportunistic pulse checking, AF-related stroke risk stratification and anticoagulation in general.

What results have you seen?
Approximately 1,050 patients per year are now managed in the community rather than the hospital setting. Additionally through assessment of patients, those in need of specialist procedures can be fast-tracked to secondary care, while those with less severe AF can be managed in primary care. Results have shown that 95% of AF patients with less complex needs are being effectively managed within the community setting, without the need for hospital attendance.

An audit of the service has shown that 100% of patients are stratified for AF-related stroke risk and appropriately anticoagulated.

The service has streamlined the pathway for this patient group and improved access to specialist services on a local level. It has also demonstrated consistency and equality of access for patients, reduction in patient waits with prompt assessment, diagnosis and management, and avoids wastage of resources and clinical expertise. A higher level of patient satisfaction has also been reported with 95% of patients preferring to be seen in the community service rather than the hospital.

What key learnings would you share with others looking to implement similar projects?
“Good coordination between primary and secondary care is critical to support this type of activity and has been fundamental to the success of this service.

Ongoing patient and healthcare professional education is important to ensure patients are detected, assessed for stroke risk, and given an appropriate choice in anticoagulation.

Implementing a service managed and delivered by specialist nurses has received a positive response from both patients and healthcare professionals. This has allowed for prompt and more detailed assessment of patients in the community, that would not have been possible otherwise, highlighting the importance of collaborative working.”
CLOSING THE GAPS IN AF PATIENT CARE

Best practice examples show that there are many around the country championing excellent AF patient care. Yet the evidence shows that as a nation overall, we are still lagging behind the rest of Europe in appropriate anticoagulation. There remain a number of misconceptions around anticoagulation and NOACs specifically, which may be based on outdated perceptions and do not align with national guidance. Some of the critical misconceptions listed below highlight the remaining barriers in practice, which challenge optimal AF patient care.

**Misconception:** Decisions about the right therapy should only be made by the primary care-giver for the patient

Collaborative working is essential between the different individuals in the AF patient care pathway. Without this, AF patients may be left inappropriately managed, not receiving anticoagulation at all, or not getting recommended therapy options. Initiation of anticoagulation may take place in primary or secondary care for AF patients, but there should be no limitations or restrictions on what anticoagulation the patient is offered. If a patient is suitable for anticoagulation with a NOAC, then they should be able to access this as a first-line option. There should also be agreed protocols across primary and secondary care on initiation of NOACs. Ongoing discussion and interaction is important between all levels and functions to ensure AF patients receive appropriate care.

**Misconception:** Aspirin can provide a safe option for prevention of AF-related stroke

While aspirin was included in the older NICE 2006 guideline for use in certain situations, it has been shown since that it has poor efficacy in reduction of AF-related stroke compared with oral anticoagulants. Additionally, data has shown that for patients aged 75 years and over, there was no significant difference in major (or intracranial) bleeding between warfarin and aspirin for prevention of AF-related stroke. There may also be the risk of overtreatment where AF patients are on a combination of warfarin (for AF) and also on an antiplatelet, such as aspirin, for vascular disease or another condition. This combination can increase bleeding risk so a decision may need to be taken to stop the antiplatelet agent. The benefits of anticoagulation outweigh the risks in the majority of people with AF.

The updated NICE guideline advises against use of aspirin for prevention of AF-related stroke, and recommends that for those at increased risk of AF-related stroke, oral anticoagulation should be first-line therapy. The Quality and Outcomes Framework (QOF) was also updated for 2015/16 to better reflect NICE recommendations, including the removal of incentivisation of aspirin use.

“While some AF patients may need to continue to take aspirin for other conditions, each aspirin prescription for prevention of AF-related stroke should be reviewed.”

Dr Dhiraj Gupta
Consultant Cardiologist and Electrophysiologist, Liverpool Heart and Chest Hospital

**Misconception:** It is not important to give AF patients alternative therapy options

Patient understanding creates better adherence and leads to better outcomes, however there may be significant gaps in the knowledge of AF patients around the need for anticoagulation and the choice available.

“Many AF patients are not aware of a choice in therapy options, and some are not even clear on the need for protection against AF-related stroke.”

Trudie Lobban MBE, FRCP Edin
Founder & CEO, AF Association

NICE states that clinicians should discuss the options for anticoagulation with the patient and base the choice on their clinical features and preferences. NOACs and warfarin have different characteristics, and it is important that patients have a choice to determine which is best to meet their needs. An essential part of appropriate prescribing of anticoagulants is to ensure that patients are fully informed and actively involved in shared decision making about their treatment.
Healthcare professionals have a duty to help patients make decisions based on an understanding of benefits and risks, and not misconceptions, particularly with complex decisions on appropriate anticoagulation. To support shared decision making between healthcare professionals and patients around appropriate anticoagulation, NICE developed a patient decision aid to coincide with the publication of the updated guideline on the management of atrial fibrillation. The patient decision aid is intended to support both those newly diagnosed with AF, and those already living with AF and having their anticoagulation reviewed.

Every contact in the patient pathway can play a fundamental role in patient education, ensuring patients are on appropriate therapies and adhere to regimes.

**Misconception: Most patients are well managed on warfarin for prevention of AF-related stroke**

Acceptance of the importance of patient choice and appropriate medication for specific patients is needed to ensure AF patients are protected. Confidence and experience with an older treatment such as warfarin, can mean clinicians may be more inclined to prescribe it to an AF patient, even when a NOAC may be more suitable for the patient needs.

It is important to acknowledge the impact that warfarin can have on the lives of some patients. Open and honest discussion is needed with AF patients on how their therapy may impact on their daily lives as well as all the available therapy options.

It is also important to focus on the TTR for warfarin patients. Those within therapeutic range for a higher percentage of time will be receiving optimal clinical benefit in terms of protection against AF-related stroke. However, those with a TTR below 65%, as well as those who have difficulty in attending for INR monitoring, should have their anticoagulation assessed as they may be appropriate for switching to NOACs.

There are tools available to support assessment of warfarin use in practice, to optimise benefits of anticoagulation and reduce risks of bleeding. These tools include the Warfarin Patient Safety audit tool (updated in March 2015) designed to support practices in assessing whether patients are achieving optimum benefit from therapy by evaluating TTR, and if they are not, assessing whether they would benefit from a medication review.

It is key that healthcare professionals at all levels feel confident to discuss all available therapy options with patients. There is a responsibility on healthcare professionals as well as commissioners and service providers to ensure there is a choice available and discussed with AF patients, as well as ensuring anticoagulation is reassessed for those patients poorly managed on warfarin.

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"There should be a constant effort to find ways around the time constraints impacting on consultations to ensure that this is not a barrier to patients fully understanding the available options and the need for therapy.”

Dr Chris Arden
General Practitioner, Park Surgery, Chandlers Ford, Hampshire

"Worryingly, perception and reality is often distorted – reported rates of anticoagulation and perception on how well AF patients are managed on warfarin is far from reality."

Sotiris Antoniou
Consultant Pharmacist, Cardiovascular Medicine, Barts Health NHS Trust

"It is unacceptable if patients are not given the full range of options, or are actively warned against NOACs, because the clinician is uncertain of the facts and figures."

Professor Martin Cowie
Professor of Cardiology, Imperial College London and Honorary Consultant Cardiologist at the Royal Brompton and Harefield NHS Foundation Trust
Misconception: It is not cost-effective to put patients on NOACs in comparison to warfarin

NICE has identified NOACs as a cost-effective option for the prevention of AF-related stroke, and they should be available to AF patients. While warfarin is less costly to initiate, the costs for those AF patients who are poorly managed on warfarin may be significant. NICE also estimated in a costing report, that implementing the recommendations in the updated guideline, would create a reduction of £224,000 in stroke costs per 100,000 of the population.¹

Consideration also needs to be given to the health gain that may be offered by NOACs for AF patients. NICE estimated that implementing the recommendations in the updated guideline would result in 10,000 fewer strokes a year.² It was also stated that while there would be an increase in drug costs as a result of the recommendations, this would be partially offset by a reduction in the cost of treating AF-related stroke.³

Commissioners are legally required to make funding available for a drug or treatment recommended by NICE in its technology appraisal guidance, and NICE offers a range of resources to support implementation of guidance at a local level.⁴,⁵ Any additional local restrictions or steps which reduce patient access to NICE recommended therapies, may leave AF patients exposed to the devastating consequences of AF-related stroke.

Adoption of innovative therapies and improvement in AF patient management can improve patient outcomes and result in longer term cost benefits. Organisations such as Academic Health Science Networks (AHSNs) are an example of how the adoption of innovation to improve patient outcomes, as well as driving economic growth, is happening in the NHS.

Misconception: Warfarin is safer for AF patients than the NOACs

Healthcare professional concerns with the lack of a licensed reversal agent, or overemphasis on bleeding risk, may result in suitable patients for NOACs being put onto older therapies such as warfarin. However, there are steps that can be taken to reverse the effects of the NOACs in the event of a major or minor bleed, including stopping treatment. Additionally, in clinical trials, NOACs were associated with reduced haemorrhagic stroke and intracerebral haemorrhage compared with warfarin.⁶ Real-world and registry data support the efficacy and safety of NOACs in clinical practice,⁷ showing similar stroke prevention and low rates of major bleeding as seen in clinical trials.⁸,⁹,¹⁰,¹¹,¹²,¹³

Misconception: AF patient adherence is better with warfarin

There are a number of benefits of NOACs for AF patients over warfarin, including less food and drug interactions and the removal of regular INR monitoring.¹⁴,¹⁵ These benefits mean the NOACs may be more convenient and improve quality of life for patients, and so create better adherence. Open discussion with patients is necessary to ensure they understand the need to prevent stroke, are invested in the therapy decision, and feel their preferences are taken into account. Ongoing patient education is also needed to encourage adherence.¹⁶ Patient adherence can also be emphasised by others in the AF patient pathway besides the prescribing clinician, such as the pharmacist from whom the AF patient collects their prescription.¹⁷ Additionally, in those AF patients who are unlikely to adhere to therapy, it is essential to ensure they are discharged with a strong care plan in place.

“The health gain for AF patients, and as a result the long-term cost benefits of NOACs, cannot be ignored. Nearly every innovation in medicine costs money but it is about spending the right money, in the right place, at the right time, for the right patient.”

Melanie Green
Head of Medicines Management,
NHS South Gloucestershire CCG
CONCLUSION

There are approximately 110,000 strokes each year in England,8 which equates to around one stroke every five minutes. Stroke is also one of the top three causes of death and the largest cause of adult disability in England, which places a significant burden on the economy.8 AF is a powerful independent risk factor for stroke3 and prevalence of AF is on the increase as the population ages.1,2 AF-related strokes can also be more severe than those not attributable to AF.2,4

While there are many around the country championing the importance of patient choice and appropriate anticoagulation to protect against AF-related stroke, as well as those implementing strategies and activities to support optimal management of AF patients, England still lags behind Europe when it comes to uptake of modern anticoagulation. In addition to this, there is considerable regional variation in how AF patients are managed and the anticoagulation choices that are being offered.25 As a result, despite the strong case for appropriate anticoagulation to reduce stroke risk, many patients in England still remain uninformed, unprotected or unable to access NOACs, leaving thousands of AF patients needlessly at risk of suffering an AF-related stroke. The addition of local barriers or restrictions around access to NOACs for appropriate patients, not only goes against NICE recommendations, it also does not meet the basic standards expected for management of a long-term condition. Misconceptions around anticoagulation, and NOACs specifically, based on outdated perceptions, can also be dangerous in the AF patient pathway, and may result in uninformed and un-empowered patients exposed to the risk of AF-related stroke.

It can take time for guidance to be adopted in practice, and consideration needs to be given to the specific situational challenges, faced by different individuals in the patient care pathway. Yet, there is still much to do to ensure AF patients are detected, diagnosed and suitably protected. All individuals involved in the care of AF patients and in the decision making process around anticoagulation choices are urged to adhere to the recommendations set out by NICE, to protect against the devastation of AF-related stroke.
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