Why you should read this article:

- To enhance your understanding of the link between atrial fibrillation and associated risk factors to ensure you are well placed to provide education to patients about their risk of developing the condition
- To support and monitor patients with atrial fibrillation, advising them about potential treatment options and referring them to suitable specialist services, where necessary
- To count towards revalidation as part of your 35 hours of CPD, or you may wish to write a reflective account (UK readers)
- To contribute towards your professional development and local registration renewal requirements (non-UK readers)

Diagnosis and management of patients with atrial fibrillation

Kay Elliott

Abstract

Atrial fibrillation is a common cardiac arrhythmia and is the most frequent arrhythmia experienced by older people. It is caused by chaotic electrical activity in the atria, leading to an irregular and often rapid heart rate. Atrial fibrillation is associated with an increased risk of ischaemic stroke, resulting from the turbulent blood flow in the atria. This article details the presentation of, and risk factors associated with, developing atrial fibrillation, the importance of reducing the risk of adverse events such as stroke, and the treatment options available. It also outlines the nursing role in the care of patients with the condition, as part of a multidisciplinary team approach.

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Keywords

anticoagulants, atrial fibrillation, cardiac arrhythmias, cardiology, cardiovascular, cardiovascular diseases, heart diseases, innovation, nurse-led clinics, nurse-led services, stroke

Aims and intended learning outcomes

The aim of this article is to enable nurses to consider their role in managing patients who have, or are at risk of developing, atrial fibrillation. After reading this article and completing the time out activities you should be able to:

- Identify the patient groups at increased risk of developing atrial fibrillation.
- Work in partnership with patients to reduce their risk of developing atrial fibrillation.
- Understand the process of clinical screening for atrial fibrillation to ensure prompt diagnosis and treatment.
- Explain why patients with atrial fibrillation have an increased risk of ischaemic stroke and understand how to reduce this risk.
- Support and monitor patients with atrial fibrillation, advising them about potential treatment options and referring them to suitable specialist services, where necessary.

Introduction

Atrial fibrillation is a commonly occurring cardiac arrhythmia that is associated with an increased risk of ischaemic stroke, hospitalisation, reduced quality of life, and death (Tsiperfal et al 2011, National Institute for Health and Care Excellence (NICE) 2014a, Kotecha et al 2017). It is caused by chaotic electrical activity in the atria, leading to an irregular and often rapid heart rate with associated symptoms. Atrial fibrillation may be linked to several other conditions including hypertension, heart failure, myocardial infarction, obesity and diabetes mellitus, and the predominant symptoms include palpitations, fatigue, dyspnoea (breathlessness) and chest tightness (Kirschhof et al 2016).

The occurrence of atrial fibrillation can be (Tsiperfal et al 2011, Kirchhof et al 2016):

- Paroxysmal – recurrent episodes that self-terminate lasting from 30 seconds up to seven days.
- Persistent – requiring intervention to terminate.
- Permanent – cannot be terminated or a decision is made not to attempt to restore normal sinus rhythm.

There are over one million people diagnosed...
with atrial fibrillation in the UK, and up to 300,000 people with the condition remain undiagnosed (British Heart Foundation et al 2015). In 2010, the estimated number of men and women with atrial fibrillation worldwide was 21.9 million and 12.6 million respectively. It is estimated that 20-40% of people with atrial fibrillation do not recognise that they have the condition (Tsiperfal et al 2011, Sibson and Khajdoji 2017).

The prevalence of atrial fibrillation is estimated to be 3% in adults aged 20 years and over (Kirchhof et al 2016). The prevalence increases with age and can be as high as 15% in those aged 75 years and over (British Heart Foundation et al 2015). The prevalence of atrial fibrillation is higher in developed countries, and is also high in people with conditions such as hypertension, heart failure, cardiac disease, obesity, diabetes and chronic kidney disease (Kirchhof et al 2016).

The number of patients diagnosed with atrial fibrillation is set to rise, with the prevalence likely to double over the next two decades (NICE 2014a, Kotecha et al 2017). This increase may be linked to ageing populations, the prioritisation of arrhythmia detection by healthcare services and the increasing number of patients with predisposing risk factors for atrial fibrillation (Kirchhof et al 2016).

### Risk factors and conditions associated with developing atrial fibrillation

There are several risk factors and conditions that can predispose patients to developing atrial fibrillation, as listed in Box 1. However, the link between these risk factors and the development of atrial fibrillation is not always made clear to the public. For example, while the NHS Choices website (www.nhs.uk/conditions/Pages/hub.aspx) lists heart disease and stroke among the risk factors for hypertension, obesity, and type 2 diabetes, it does not mention their link with atrial fibrillation.

Nurses who understand the link between atrial fibrillation and the risk factors listed in Box 1, will be better placed to educate patients about their risk of developing the condition. Understanding the risk factors will also assist nurses to identify patients who are in these high-risk groups, in which there is an increased chance of detecting atrial fibrillation.

### Assessment and diagnosis

Opportunistic screening for atrial fibrillation can be incorporated in healthcare services by nurses undertaking manual pulse checks for high-risk patients. Following the detection of an irregular pulse, a 12-lead electrocardiogram (ECG) is required to confirm or refute a diagnosis of atrial fibrillation (Figures 1 and 2) (NICE 2014a). While many individuals may not recognise that they have atrial fibrillation, some may notice that they experience palpitations, increased fatigue, dyspnoea, chest tightness, difficulty sleeping and psychological distress (Kirchhof et al 2016). However, symptoms of extreme dyspnoea, breathing difficulties when lying down (orthopnoea) or sleeping (paroxysmal nocturnal dyspnoea), chest pain and/or syncope (fainting) require prompt investigation and treatment (Gray and Toghill 2001).

### Key points

- **Atrial fibrillation** is a commonly occurring cardiac arrhythmia that is associated with an increased risk of ischaemic stroke, hospitalisation, reduced quality of life, and death (Tsiperfal et al 2011, National Institute for Health and Care Excellence (NICE) 2014a, Kotecha et al 2017).

- There are more than one million people diagnosed with atrial fibrillation in the UK, and up to 300,000 people with the condition remain undiagnosed (British Heart Foundation et al 2015).

- Once atrial fibrillation has been diagnosed, the patient’s risk of stroke can be significantly reduced with anticoagulation therapy. The use of a vitamin K antagonist such as warfarin can reduce the risk of stroke or thromboembolism by 64% (Freedman et al 2016).

- Anticoagulation therapy is associated with an increased risk of bleeding compared with no treatment; however, for most patients, the benefit of stroke risk reduction outweighs the risk of bleeding (NICE 2014a).

- Nurse-led atrial fibrillation clinics have been found to provide equal or superior outcomes to standard cardiology clinics, in relation to cardiovascular-related hospitalisation and death (Hendricks et al 2012, Qvist et al 2015).

### Nurse-led model of care

When an ECG is used following detection of an irregular pulse, atrial fibrillation can be diagnosed by an absence of normal P waves on the ECG, the presence of low-amplitude fibrillation waves and ‘irregularly irregular’ (an absence of any pattern) ventricular complexes (QRS) (Houghton and Gray 2008, Kirchhof et al 2016).

Atrial fibrillation commonly originates in the left atria (Figure 3). Nurses who have not yet developed competency in interpreting ECGs may require assistance from senior colleagues to confirm a diagnosis of atrial fibrillation.

### TIME OUT 1

Consider the patients you encounter in your clinical area. Do you think any of them may be experiencing the symptoms of atrial fibrillation, but have not been diagnosed with the condition? What steps would you take to diagnose atrial fibrillation in these patients?

### BOX 1. Risk factors and conditions associated with developing atrial fibrillation

- Chronic kidney disease
- Chronic obstructive pulmonary disease
- Diabetes mellitus
- Excessive alcohol consumption
- Genetic predisposition
- Habitual vigorous exercise
- Heart failure
- Hypertension
- Myocardial infarction
- Obesity
- Obstructive sleep apnoea
- Old age
- Smoking
- Thyroid dysfunction
- Valvular heart disease

(Adapted from Kirchhof et al 2016)

### TIME OUT 2

Examine the ECG readings shown in Figures 1 and 2. What are the characteristics of atrial fibrillation, as seen on an ECG? How would you explain these characteristics and what they indicate to another member of your multidisciplinary team?
Once a diagnosis of atrial fibrillation is confirmed, nurses have an important role in explaining the condition to patients in a way they can understand. The explanation should be tailored to patients’ requirements, and relevant information resources such as illustrated leaflets, websites and anatomical models can be used to support the initial verbal explanation (NICE 2014a).

Assessing and reducing the risk of ischaemic stroke
Atrial fibrillation is associated with an increased risk of ischaemic stroke and thromboembolism, resulting from turbulent blood flow in the atria. Thromboembolism involves a thrombosis (clot) forming and travelling through the circulatory system, causing a blockage. In the case of ischaemic strokes, it is thought that the stasis of blood in the atria during atrial fibrillation leads to clot formation and subsequent occlusion of a cerebral artery (Tsiperfal et al 2011, Freedman et al 2016). Approximately 20% of strokes are thought to be caused by atrial fibrillation (Sibson and Khadjooi 2017). An atrial fibrillation-related stroke is more likely to result in significant disability or death compared with strokes from other causes (Freedman et al 2016).

The nurse should assess the patient’s risk of stroke using a validated tool such as the CHA₂DS₂-VASc score (NICE 2014a, Kirchhof et al 2016). The CHA₂DS₂-VASc score uses several parameters to assess the patient’s risk of stroke, as follows (Lip et al 2010):

- C – congestive heart failure or left ventricular systolic dysfunction (1 point).
- H – hypertension – blood pressure consistently above 140/90mmHg, or hypertension being treated with medication (1 point).
- A₂ – age 75 years or over (2 points).
- D – diabetes (1 point).
- S₂ – stroke, transient ischaemic attack and/or thromboembolism (2 points).
- V – vascular disease (1 point).
- A – age 65-74 years (1 point).
- Sc – sex category: female (1 point).
- L – labile or high international normalised ratio (INR). A high

Once calculated, the patient’s CHA₂DS₂-VASc score will assist nurses in identifying those who have a low risk of stroke despite the presence of atrial fibrillation. Low-risk patients – those with a CHA₂DS₂-VASc score of 0 for men, or 1 for women – should not be recommended for anticoagulation therapy (NICE 2014a, Freedman et al 2016, Kirchhof et al 2016). However, patients who are ‘truly’ low risk are relatively uncommon; for example, those aged 65 years or over score at least one additional point on the CHA₂DS₂-VASc scoring system.

Once atrial fibrillation has been diagnosed, the patient’s risk of stroke can be significantly reduced with anticoagulation therapy. The use of a vitamin K antagonist such as warfarin can reduce the risk of stroke or thromboembolism by 64% (Freedman et al 2016). There is also a range of anticoagulants known as direct oral anticoagulants (DOACs), which include apixaban, dabigatran etexilate, edoxaban and rivaroxaban (NICE 2014a). DOACs have been demonstrated to provide similar or superior stroke protection, with a reduced risk of intracranial haemorrhage compared with warfarin (Barnes and Kurtz 2016). However, dabigatran, edoxaban and rivaroxaban at the full dose are associated with an increased risk of gastrointestinal bleeding compared with warfarin (Raval et al 2017). The use of DOACs is contraindicated in patients with mechanical heart valves because it has not been proven that they provide equal stroke prophylaxis compared with warfarin (NICE 2014a, Kirchhof et al 2016).

Anticoagulation therapy is associated with an increased risk of bleeding compared with no treatment; however, for most patients, the benefit of stroke risk reduction outweighs the risk of bleeding (NICE 2014a). Increased risk of bleeding can include relatively minor bleeds such as small cuts that take longer than normal to clot, or significant internal bleeding (British Heart Foundation 2014). A patient’s risk of bleeding should be assessed using a validated tool such as the HAS-BLED score (NICE 2014a, Kirchhof et al 2016), which uses several parameters, as follows (Pisters et al 2010):

- H – history of stroke.
- A – history of bleeding.
- L – labile or high international normalised ratio (INR).
- S – history of stroke.
- V – vascular disease.
- E – current alcohol consumption.
- D – age 65 years or over (1 point).
- B – blood pressure consistently above 140/90mmHg.
- L – labile or high international normalised ratio (INR).

A patient with a HAS-BLED score of 4 or more should be considered for warfarin, or a lower HAS-BLED score should be reassessed every 3 months. DOACs have been demonstrated to provide similar or superior stroke protection, with a reduced risk of intracranial haemorrhage compared with warfarin (Raval et al 2017). However, DOACs are associated with an increased risk of gastrointestinal bleeding compared with warfarin (NICE 2014a, Kirchhof et al 2016).

The nurse should explain any relevant information resources to patients’ requirements, and anatomical models can be used to support the initial verbal explanation (NICE 2014a).
INR indicates over-anticoagulation, increasing the risk of bleeding and prolonging the time it takes to clot and stop bleeding. Conversely, if the INR is too low, the risk of an ischaemic stroke is increased.

» E – elderly (aged over 65 years).

» D – drug or alcohol use
(medicines use that predisposes the patient to bleeding; or the consumption of more than eight alcoholic drinks per week).

The HAS-BLED score indicates the patient’s overall risk of bleeding and identifies modifiable risk factors that can be addressed to reduce this risk. Actions that could be taken to address bleeding risk factors may include: optimising blood pressure management; discontinuing non-steroidal anti-inflammatory drugs; encouraging patients to reduce their alcohol consumption; and improving the patient’s INR control (NICE 2014a). The aim is not to exclude patients from anticoagulation, but to actively reduce bleeding risk factors (NICE 2014a, Freedman et al 2016).

It is important for independent nurse prescribers to understand the factors that may mean that certain DOACs are unsuitable or require a dosage adjustment. These factors include: reduced renal function, which will affect medicine clearance from the body; concomitant medicines; and the patient’s weight, which may affect the prescribed dosage or choice of anticoagulant (Kirchhof et al 2016, Clinical Excellence Commission 2017, Raval et al 2017). For example, patients who weigh over 120kg could have insufficient plasma concentration of anticoagulant when taking DOACs and may be more reliably treated with an anticoagulant such as warfarin. Clinical Excellence Commission (2017) guidelines and Hiedbuchel et al (2017) list the medicines that have proven or potential interactions when taken concomitantly with DOACs. For example, concomitant use of rifampicin, carbamazepine, phenytoin or St John’s Wort will reduce the patient’s exposure to apixaban and should be avoided (Raval et al 2017).

The decision whether to commence anticoagulation therapy and which drug to choose can be multifaceted. For example, taking an anticoagulant will mean that some patients will avoid an ischaemic stroke caused by atrial fibrillation, while others will still experience a stroke despite taking an anticoagulant; similarly, although taking an anticoagulant increases the risk of major bleeding, this is not a factor in all patients taking this medicine (NICE 2014b).

Promoting person-centred care

Discussions about optimal stroke prevention strategies should be individualised and patients should be supported to make informed decisions about their treatment (NICE 2014a). A variety of factors might influence a patient’s decision regarding which anticoagulant therapy they would prefer; for example, some patients might prefer a once-daily drug, while others might prefer an anticoagulant that has an established reversal agent, for example idarucizumab reverses the anticoagulant effect of dabigatran (NICE 2016).

While not all nurses are responsible for providing advice and support regarding anticoagulation therapy to patients who have been newly diagnosed with atrial fibrillation, it is important that all nurses recognise that this type of support must be provided. Therefore, nurses should be able to promptly refer patients to specialist colleagues where necessary. As part of the referral process, nurses should provide patients with a preliminary explanation of atrial fibrillation and briefly outline the potential treatment options.

**TIME OUT 3**

If a patient presented with acute symptoms associated with atrial fibrillation, would you know how to escalate their management to a suitable specialist service? Identify what steps would need to be taken to refer a patient in your clinical area, for example specific documentation and which team or colleagues to contact and how

**TIME OUT 4**

Access the European Society of Cardiology guidelines (Kirchhof et al 2016) for the management of atrial fibrillation, and explore the evidence base for current treatment approaches. Consider the treatment approaches to atrial fibrillation used in your clinical area and whether these adequately reflect the guidelines

**Treatment and management of atrial fibrillation**

As well as reducing the risk of stroke in patients with atrial fibrillation, other treatment options should be considered and tailored to meet the patient’s presentation and preferences. The two treatment approaches to atrial fibrillation are

**Figure 3. Normal heart and heart with atrial fibrillation**

<table>
<thead>
<tr>
<th>Normal heart</th>
<th>Heart with atrial fibrillation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinus node impulse</td>
<td>Atrial fibrillating impulses</td>
</tr>
<tr>
<td>Impulse passes through atrioventricular node</td>
<td>Chaotic signals passing through atrioventricular node</td>
</tr>
</tbody>
</table>

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strategies for managing atrial fibrillation are known as ‘rate control’ and ‘rhythm control’, and are often used in combination (Van Gelder et al 2016). In rate control, the ventricular rate is reduced but atrial fibrillation continues, whereas in rhythm control, efforts are made to achieve and maintain normal sinus rhythm (Van Gelder et al 2016). Controlling ventricular rate in atrial fibrillation is important to reduce symptoms and to avoid tachycardia-induced cardiomyopathy (change to the structure and function of the heart muscle as a result of persistently rapid heart rates) and subsequent heart failure symptoms (Van Gelder et al 2016).

Rate control
A rate-control strategy alone is often sufficient when atrial fibrillation is an incidental finding, discovered while assessing another condition and with mild or non-existent symptoms. In some cases, these patients can be managed in their usual healthcare setting without specialist input, as long as their anticoagulation, rate control and echocardiogram requirements can be met.

Effective heart rate control can often be achieved by commencing a beta blocker or the drug diltiazem hydrochloride, which is designed to manage high blood pressure, angina and some heart rhythm disorders (NICE 2014a, Van Gelder et al 2016). However, diltiazem is contraindicated in patients with heart failure, which co-exists with atrial fibrillation in approximately 50% of cases (Kotecha et al 2017). Therefore, beta blockers that also contain antiarrhythmic properties are an optimal initial first choice for rate control.

Digoxin can also be used for additional heart rate control in persistent atrial fibrillation. However, since digoxin does not provide effective heart rate control during exercise, it should not be routinely used as a sole agent, except in patients who are mostly sedentary or who cannot undertake physical activity (NICE 2014a, Van Gelder et al 2016). Guidelines indicate that the target resting heart rate for those with atrial fibrillation, without heart failure or significant symptoms, can be lenient, at under 110 beats per minute (Van Gelder et al 2016). For those with atrial fibrillation and heart failure or significant symptoms, stricter heart rate control involving a resting heart rate under 80 beats per minute is recommended (Van Gelder et al 2016).

NICE (2014a) guidelines stipulate that those who remain symptomatic following initial treatment for atrial fibrillation should be promptly referred for specialist cardiac input within four weeks of the final failed treatment or no longer than four weeks after recurrence of atrial fibrillation after cardioversion. Cardioversion is a broad term that describes interventions aimed at restoring sinus rhythm. This is commonly achieved using direct current (DC) cardioversion (defibrillation) or antiarrhythmic drugs.

The onset of atrial fibrillation may render some patients sufficiently haemodynamically compromised that they require urgent acute rate control and/or cardioversion (Tisperfal et al 2011, Piccini and Fauchier 2016).

Rhythm control
The decision to use a rhythm control strategy in atrial fibrillation is primarily based on whether the patient has significant symptoms of atrial fibrillation (Piccini and Fauchier 2016). Other factors that might indicate rhythm control include where the atrial fibrillation has a reversible cause, for example thyroid abnormality, where heart failure is thought to have been caused by atrial fibrillation, or where the atrial fibrillation has a recent onset (NICE 2014a).

Patients experiencing paroxysmal atrial fibrillation may be significantly symptomatic, with a sinus rhythm too slow to tolerate higher doses of rate-control drugs, but conversely with a heart rate that is extremely rapid when paroxysms of atrial fibrillation do occur. A specialist cardiac service may offer alternative antiarrhythmic drugs such as flecainide acetate, propafenone hydrochloride or dronedarone, and/or ablation therapy. Atrial fibrillation ablation is undertaken in a cardiac catheter laboratory using X-ray imaging, and involves passing a catheter from a vein in the patient’s groin to the heart and using cauterisation (radiofrequency ablation) or freezing (cryoablation) to produce scar tissue that ‘blocks’ the spread of the chaotic electrical signals that drive atrial fibrillation. The purpose of these interventions is to maintain normal sinus rhythm, avoid or minimise further paroxysms, reduce symptoms and improve the patient’s quality of life (Tisperfal et al 2011).

Rhythm control options for those who have persistent atrial fibrillation include cardioversion, antiarrhythmic drugs or atrial fibrillation ablation. The long-term success of cardioversion after one year is approximately 50% (Sulke et al 2007). Where atrial fibrillation recurs following cardioversion, a joint decision between the patient and an arrhythmia specialist will be required to decide whether to pursue rhythm control with antiarrhythmic drugs and/or ablation, or, alternatively, to adopt a rate-control strategy. Factors such as the patient’s perception of the benefits of achieving a normal sinus rhythm, the likelihood of success, and the risks involved in ongoing management and monitoring strategies need to be considered.

Some patients continue to exhibit symptoms of atrial fibrillation because of intolerance or resistance to rate-control drugs. In this case, a ‘pace and ablate’ strategy may be used. This involves implanting a pacemaker device followed by ablation of the atrioventricular (AV) node, causing complete heart block. Ablating the AV node prevents the rapid chaotic electrical impulses from the atria being communicated to the ventricles through the usual AV pathway. This ensures that the optimal heart rate control can be achieved, via the pacemaker, to improve symptoms. However, because the pace and ablate approach leads to the patient being dependent on the pacemaker, it is only considered after other options have been excluded (Kirchhof et al 2016). When tachycardia and bradycardia co-exist (tachy-brady
syndrome), a pacemaker implant can prevent bradycardia, enabling optimal rate-control drugs to be safely administered.

**Nursing role in atrial fibrillation**

In the UK, arrhythmia nurse specialists make a valuable contribution to specialist arrhythmia services. Their role can involve undertaking nurse-led DC cardioversion (Boodhoo et al 2004, Shelton et al 2006), as well as leading atrial fibrillation clinics. Nurse-led atrial fibrillation clinics provide detailed assessment and review of patients with atrial fibrillation, as well as developing management plans, discussing treatment recommendations, and providing patient education and support. Nurse-led atrial fibrillation clinics have been found to provide equal or superior outcomes to standard cardiology clinics, in relation to cardiovascular-related hospitalisation and death (Hendricks et al 2012, Qvist et al 2015).

Nurse-led anticoagulation clinics also provide patient education, as well as monitoring of INR results to assess whether these are within the target range. The target range will be set by the prescriber depending on the reason for warfarin use; for example, a patient with a mechanical heart valve will require warfarin and may have a higher INR target range. Specialist anticoagulation nurses are responsible for titrating the dose of warfarin in response to the patient’s INR results to achieve the target INR range. They are also responsible for identifying patients whose INR results fluctuate between too high and too low and are therefore at increased risk of ischaemic stroke and bleeding (NICE 2014a). In some areas in the UK, anticoagulation services, including those led by nurses, have been integrated in GP surgeries.

All nurses have an important role in the prevention, detection and monitoring of atrial fibrillation. However, primary care and community nurses who manage the same patients for a long period of time have the optimal opportunity to detect and manage long-term atrial fibrillation.

The nursing role of providing support and ongoing monitoring of patients with atrial fibrillation is not undertaken in isolation, but in the context of the multidisciplinary team. This might include doctors and pharmacists, but also healthcare professionals who support patients in making lifestyle changes or provide psychological support. NICE (2014a) guidelines emphasise that patients diagnosed with atrial fibrillation should receive a ‘personalised package of care’ that includes appropriate treatment, education, ongoing support and psychological care. Support is also available from agencies and charities such as the Atrial Fibrillation Alliance, British Heart Foundation, Stroke Association and NHS psychology services.

**TIME OUT 5**

Consider the nurse-led support for patients with atrial fibrillation in your local area. Could your local healthcare service do more to provide support for these patients? How could you improve the provision of nurse-led services for patients with atrial fibrillation locally?

**Ongoing monitoring**

Providing ongoing monitoring for patients with atrial fibrillation presents several challenges. Initially, monitoring may focus on checking a patient’s understanding and acceptance of their new diagnosis. It may also take time for the patient and healthcare professionals to agree and establish a suitable anticoagulation strategy and adequate heart rate control. The patient’s response to the initial management of atrial fibrillation should be evaluated, in case they remain symptomatic and require specialist input.

Long-term monitoring of patients with atrial fibrillation can pose a significant challenge because their treatment needs may change over time. Therefore, it is important to review the patient’s rate-control and/or antiarrhythmic drugs as their condition changes. Primary care and community nurses are well-placed to provide the majority of the ongoing monitoring required, while hospital nurses will become involved if an acute admission becomes necessary, for example if there is an exacerbation of heart failure symptoms, ischaemic stroke or bleeding.

Patients taking antiarrhythmic drugs for atrial fibrillation should be reviewed at regular intervals to reassess whether continuing treatment is still indicated and safe (Kirchhof et al 2016). The patient’s adherence to their medicines is essential; anticoagulants in particular will only reduce ischaemic stroke risk if taken appropriately. Freedman et al (2016) stated that many patients do not persist with anticoagulation therapy, while Martinez et al (2016) found that the number of patients who maintained anticoagulant therapy after one year was significantly higher in those taking DOACs than those taking vitamin K agonists such as warfarin.

Understanding how patients tolerate their anticoagulation treatment and eliciting their views on continuing with treatment is an essential element of the nursing role, and assists nurses to develop strategies to manage any side effects and promote patient adherence to their medicines. For example, the nurse could suggest that the patient changes to a different anticoagulant if they are experiencing side effects; or support a patient with dementia to take their medicines, for example by recommending the use of a pill organiser or educating their carer on the patient’s treatment.

The decision as to whether the risk associated with anticoagulants (bleeding) outweighs the benefit (stroke risk reduction) should be revisited at regular intervals. Patients who are initially at low risk of experiencing a stroke will eventually reach the threshold where anticoagulation therapy is required because of the development of stroke risk factors such as older age, hypertension and diabetes, as outlined in the CHA2DS2-VASc scoring system (NICE 2014a, Kirchhof et al 2016). Discussions with patients about initiating anticoagulation therapy are required once it is calculated that their atrial fibrillation poses a significant risk of stroke.

The risks to the patient associated with taking anticoagulants should be reviewed regularly, with steps
References


Heidbuchel H, Verhamme P, Alings M et al (2017). Nurses should consider these areas when reviewing any patient who has been prescribed anticoagulants. The European Heart Rhythm Association guidelines (Heidbuchel et al 2017) also stipulate that the frequency of monitoring should be determined by the patient’s age and comorbidities.

Conclusion

The prevention, management and ongoing monitoring of atrial fibrillation is multifaceted, with nurses having an important role throughout the care of patients with this condition. Specialist nurses, such as arrhythmia nurse specialists and those running nurse-led anticoagulation clinics, have the additional responsibility of providing expert knowledge for patients and other healthcare professionals.

Nurses have an important role in multidisciplinary teams, which can contribute to the effective care of those with, and at risk of developing, atrial fibrillation. With the prevalence of atrial fibrillation likely to double over the next two decades, it is important that nurses understand the symptoms, diagnosis and management of this condition so that they can provide evidence-based and person-centred care.

TIME OUT 6
Consider how diagnosing and managing patients with atrial fibrillation relates to The Code: Professional Standards of Practice and Behaviour for Nurses and Midwives (Nursing and Midwifery Council 2015) or, for non-UK readers, the requirements of your regulatory body.

TIME OUT 7
Now that you have completed the article, reflect on your practice in this area and consider writing a reflective account: rcni.com/reflective-account

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Atrial fibrillation
TEST YOUR KNOWLEDGE BY COMPLETING THIS MULTIPLE-CHOICE QUIZ

1. Atrial fibrillation is:
   a) A rare hypertensive condition
   b) A ventricular valve syndrome
   c) A commonly occurring cardiac arrhythmia
   d) An atrial refill dysfunction

2. Which of the following is a type of atrial fibrillation?
   a) Paroxysmal
   b) Persistent
   c) Permanent
   d) All of the above

3. Nurses could undertake opportunistic screening for atrial fibrillation through:
   a) Regular blood pressure monitoring
   b) Manual pulse checks for high-risk patients
   c) Inpatient blood tests
   d) Routine electrocardiogram

4. Which of the following tools can be used to assess a patient’s risk of bleeding?
   a) TIME framework
   b) HAS-BLED score
   c) Waterlow score
   d) CHA2DS2-VASc score

5. Following a diagnosis of atrial fibrillation, a patient’s risk of stroke could be decreased by:
   a) Anticoagulation therapy
   b) Reducing physical activities
   c) Increasing salt intake
   d) Non-steroidal anti-inflammatory drugs

6. Which of these drugs is a direct oral anticoagulant?
   a) Dabigatran etexilate
   b) Heparin
   c) Clopidogrel
   d) Warfarin sodium

7. Which of the following is a symptom of atrial fibrillation?
   a) Palpitations
   b) Increased fatigue
   c) Chest tightness
   d) All of the above

8. Which statement is false?
   a) In rate control, the ventricular rate is reduced but atrial fibrillation continues
   b) Effective heart rate control can be achieved by taking the drug diltiazem hydrochloride
   c) In rate control, the ventricular rate is increased but atrial fibrillation reduces
   d) Effective heart rate control can be achieved by taking a beta blocker

9. When might a rhythm control strategy be used in atrial fibrillation?
   a) If the atrial fibrillation has a non-reversible cause
   b) If the patient has heart failure that is not caused by atrial fibrillation
   c) If the patient has a long-term history of atrial fibrillation
   d) If the patient has significant symptoms of atrial fibrillation

10. A patient’s choice or dose of anticoagulant may need to be reviewed in response to:
    a) Changes in their liver function
    b) Elevated pulse rate
    c) Hypertension
    d) Vascular disease

How to complete this quiz
This multiple-choice quiz will help you to test your knowledge. It comprises ten questions that are broadly linked to the CPD article. There is one correct answer to each question.
   » You can test your subject knowledge by attempting the questions before reading the article, and then go back over them to see if you would answer any differently.
   » You might like to read the article before trying the questions.

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This multiple-choice quiz was compiled by Jason Beckford-Ball
The answers to this multiple-choice quiz are:

This activity has taken me minutes/hours to complete. Now that I have read this article and completed this assessment, I think my knowledge is:
Excellent [ ] Good [ ] Satisfactory [ ] Unsatisfactory [ ] Poor [ ]
As a result of this I intend to: ____________________________________________