

Atrial Fibrillation Guidelines, Key Messages and Frequently asked questions (FAQs)

Key messages

Statement of purpose

These guidelines have been developed to assist Australian clinicians in the diagnosis and management of adult patients with atrial fibrillation (AF). They are informed by recent evidence interpreted by local experts to optimise application in an Australian context. They are the first Australian guidelines on AF. The optimal diagnostic and treatment strategies for AF are continually evolving and care for patients requires confidence in integrating these new developments into practice.

Definition

Atrial fibrillation is an arrhythmia (irregular heartbeat) diagnosed on electrocardiogram showing irregular RR intervals and no discernible distinct P waves. By accepted convention, an episode lasting at least 30 seconds is diagnostic.

Atrial fibrillation and cardiovascular health

AF is the most common recurrent arrhythmia faced in clinical practice, and it can have a substantial effect on patients. It can cause stroke, heart failure and death.¹⁻³ While AF often leads to an impaired quality of life,⁴ many people have no symptoms, and is often discovered once the serious consequences (such as stroke) occur. Appropriate screening and diagnosis is essential to prevent these consequences. Furthermore, several conditions (“risk factors”) have been shown to result in AF, and it is essential that these risk factors are detected and managed.

Australian profile

It is estimated that almost three percent of Australian adults are currently living with atrial fibrillation,^{1, 5} equating to more than half a million Australians. However, true prevalence is underestimated because subclinical AF is frequent.⁶ Rates of AF also increase significantly with increasing age.^{1, 5} Aboriginal and Torres Strait Islander peoples have a higher incidence of AF and subsequent mortality attributable to their greater burden of cardiovascular disease.⁷ The reasons for poorer outcomes for Indigenous Australians are multifactorial and complex, but include a number of systematically entrenched barriers such as lack of access to culturally appropriate services, a lack of knowledge of the importance of the service, cost of attendance, transport difficulties and inflexible schedules which all work to make access to services more difficult.

In Australia, the prevalence of AF in people aged 55 years or more are projected to double over the next two decades as a result of an ageing population and improved survival from contributory diseases.⁸ In the past decade (from 2007 to 2016), deaths from atrial fibrillation have increased by 82 percent. A total of 15,960 Australians have lost their lives due to atrial fibrillation over the last 10 years.⁹ These figures likely underestimate the true number of deaths associated with AF as they do

not account for death caused by AF related conditions such as stroke and heart failure. AF is a major cause of stroke in Australia. Future prevalence of AF may also be impacted by better detection of AF and by a changing pattern of risk factors such as obesity.

From a public health perspective, AF imposes a large and growing burden on healthcare resources, with hospitalisations being the major cost driver.¹⁰ Between 10 and 30% of patients with AF are admitted to hospital each year for cardiovascular and non-cardiovascular causes.¹¹ A study showed that the total number of AF hospitalisations in Australia was increasing by 6% per year over a 15-year period, which was greater than that for other cardiovascular conditions.¹² Hence, the societal and healthcare costs of AF will continue to escalate unless AF and its risk factors and complications are prevented and treated effectively.

In 2016, atrial fibrillation was the underlying cause of 2,128 deaths in Australia, accounting for 1.3 percent of total deaths. This is the equivalent of six deaths due to atrial fibrillation each day.⁹

Key messages – consumer

These guidelines assist health professionals to detect and manage atrial fibrillation.

These guidelines have been written to assist Australian health professionals to improve patient outcomes such as survival, improvement in symptoms, reduction in hospital admissions, prevention of stroke, and appropriate use of the latest evidence-based care and timely diagnosis. The optimal prevention, diagnosis, and treatment strategies for atrial fibrillation are continually evolving and care for patients requires confidence in integrating these new developments into practice.

The guidelines stress the importance of patient-centred care and shared informed decision making, especially regarding the use of anticoagulant (blood thinning) medications to prevent stroke. The goal of the guidelines is to assist clinicians to provide effective, efficient, holistic and comprehensive treatment that is tailored to the individual patient's values and preferences, focusing on those with chronic conditions and multi-morbidities, and recognising the multidimensional needs of this population.

The guidelines include recommendations on:

- Screening, prevention, diagnostic work-up – including detection and management of risk factors
- Medications, surgery, and procedures recommended to control heart rate and rhythm
- Medications, surgery, and procedures recommended to prevent stroke, while optimising safety and balancing any risks
- Integrated multidisciplinary care - a collaborative, patient-centred approach to the provision of healthcare that focuses on improving patients' experiences, health outcomes and quality of life, while creating efficiencies in the health system.

Key messages – health professionals

- Opportunistic screening in the clinic or community is recommended for patients over the age of 65.
- The importance of deciding between a rate and rhythm control strategy at the time of diagnosis and periodically thereafter is highlighted. Beta-blockers or non-dihydropyridine calcium channel antagonists remain first-line choice for acute and chronic rate control. Cardioversion remains first line choice for acute rhythm control when clinically indicated. Flecainide is preferable to amiodarone for acute and chronic rhythm control. Failure of rate or rhythm control should prompt consideration of percutaneous or surgical ablation.
- The sexless CHA₂DS₂-VA is recommended to assess stroke risk, which provides one consistent threshold across men and women. Most guidelines have adopted the cumbersome practice of selecting different CHA₂DS₂-VASc thresholds for males and females. Recommending anticoagulation because of female sex alone or in the presence of one additional risk factor does not confer sufficient or consistent increased risk. To avoid this practice, these guidelines recommend a sexless (i.e. removing female sex) stroke prediction score, abbreviated as CHA₂DS₂-VA score. These guidelines provide consistent recommendations for both sexes as follows:
 - Anticoagulation is not recommended for a score of 0, and is recommended for a score of ≥ 2 . If anticoagulation is indicated, non-vitamin K oral anticoagulants (NOACs) are recommended in preference to warfarin for non-valvular AF. Warfarin is recommended for patients with mechanical heart valves or moderate to severe mitral stenosis.
- An integrated care approach should be adopted, delivered by multidisciplinary teams, including patient education and the use of eHealth tools and resources where available. Regular monitoring and feedback of risk factor control, treatment adherence and persistence should occur.

Frequently asked questions (FAQs)

Why have the guidelines been developed?

AF is the most common arrhythmia seen in clinical practice and a major contributor to stroke in Australia. Given the complexities of diagnosis and treatment currently available, and that appropriate care has the potential to have a major impact on Australians living with AF, the National Heart Foundation of Australia (NHFA) and the Cardiac Society of Australia and New Zealand (CSANZ) undertook to write these guidelines.

International guidelines on the diagnosis and management of atrial fibrillation are available but these often differ from each other with regards to individual recommendations, and no such guidelines had been developed specific to the Australian population. AF management in Australia also differs from the international population with regards to drug availability. The NHFA in partnership with CSANZ resolved to produce Australian guidelines for the diagnosis and management of atrial fibrillation.

For whom were the guidelines developed?

These clinical guidelines have been developed to assist Australian practitioners in the management of patients with AF. They are intended to be used by practising clinicians across all disciplines caring for such patients. Some of the core recommendations of this document have been informed by existing international guidelines, including the 2016 European Society of Cardiology *Guidelines for the management of atrial fibrillation*¹³, which were developed in collaboration with the European Association for Cardio-Thoracic Surgery, and the 2014 American Heart Association/American College of Cardiology/Heart Rhythm Society *Guideline for the management of patients with atrial fibrillation*¹⁴.

However, these Australian guidelines provide a focus on local practice and include some updated recommendations reflecting more recent evidence generation.

How can I access a copy of the guidelines?

A full copy of the guidelines along with an executive summary of the guidelines and other resources can be accessed via the Heart Foundation website at:

<https://www.heartfoundation.org.au/for-professionals/clinical-information/atrial-fibrillation>

How were the guidelines developed?

The guidelines were written by members of the working group who are leading experts in their fields and highly renowned both in Australia and overseas. The guidelines were developed through a vigorous process involving strict governance. The NHFA policy team facilitated writing of the guidelines.

The approach to development and consultation was designed to ensure appropriate stakeholder representation and engagement in the guideline writing process. The methodology used in the development of these guidelines was guided by the methodological expertise of working group members.

Who was involved in developing the guidelines?

The Heart Foundation's ethical rules forbid industry involvement in the development of clinical guidelines. To maintain the independence of the process, the atrial fibrillation guidelines were solely funded by the Heart Foundation and the Cardiac Society of Australia and New Zealand, with no financial contribution from industry.

The working group involved in the development of the guidelines comprises a multidisciplinary group of experts including cardiologists (including electrophysiologists), an epidemiologist and physician, a pharmacist, nurses, a consumer, general practitioners, a neurologist, and a cardiothoracic surgeon.

The Working Group comprised of;

Professor David Brieger (Chair), A/Professor John Amerena, Professor John Attia, A/Professor Beata Bajorek, Dr Kim H Chan, Professor Ben Freedman, Dr Caleb Ferguson, Ms Tanya Hall, A/Professor Haris Haqqani, Dr Jeroen Hendriks, A/Professor Charlotte Hespe, Professor Joseph Hung, Professor Jonathan M. Kalman, Professor Prashanthan Sanders, A/Professor John Worthington, Professor Tristan D. Yan and Professor Nicholas Zwar.

The following organisations nominated representatives to participate in the reference group to represent their views during development:

- Cardiac Society of Australia New Zealand (CSANZ)
- Royal Australian College of General Practitioners (RACGP)
- The Australian Cardiovascular Nursing College (ACNC)
- The Council of Remote Area Nurses of Australia (CRANA)
- The Australian and New Zealand Society for Geriatric Medicine (ANZSGM)
- Australian and New Zealand Society of Cardiac Thoracic Surgeons (ANZSCTS)
- The Australian College of Rural and Remote Medicine (ACRRM)

Which organisations have endorsed the Guideline?

- The Stroke Foundation
- Australian Commission on Safety and Quality in Health Care (ACSQHC)
- Australian and New Zealand Society of Cardiac and Thoracic Surgeons (ANZSCTS)
- The Australian College of Rural and Remote Medicine (ACRRM)
- The Council of Remote Area Nurses of Australia (CRANA)
- Australian College of Nursing (ACN)

How will the guidelines be put into practice?

The Heart Foundation is working with key stakeholder organisations to incorporate the guidelines recommendations into regular practice for health professionals. The Heart Foundation is also developing a guidelines app for health professionals to access the guidelines efficiently and easily in every day clinical practice.

Are these guidelines applicable to other countries?

The guidelines are informed by international evidence with a focus on local practice. They can be used internationally provided individual patient factors are taken into account.

When will the guidelines be updated?

The guidelines are planned for updating in 5 years or less.

Who funded the guidelines?

To maintain the independence of the process, the atrial fibrillation guidelines are funded solely by the Heart Foundation and the Cardiac Society of Australia and New Zealand, with no financial contribution from industry.

What is Atrial Fibrillation (AF)?

Atrial fibrillation is a type of abnormal rhythm (arrhythmia) of your heart. AF is the most common recurrent arrhythmia faced in clinical practice, and it causes substantial morbidity and mortality.

How many people in Australia have AF?

Current estimates of AF prevalence in developed countries such as Australia range from 2 to 4%, and there is a steep gradient with increasing age. However, true prevalence is underestimated because subclinical AF is frequent. This can be a challenge for treating clinicians, because adverse consequences of AF (e.g. a stroke) may occur before AF is diagnosed.

How are the guidelines relevant to GPs?

The guidelines were developed with GPs as a key target audience. Two GPs were on the writing group and there was GP engagement through the reference group and public consultation. Much of the scope of the guidelines applies to general practice. See the [key messages for health professionals](#) section for a summary of some major recommendations.

How are the guidelines relevant to nurses?

There were two specialist nurses on the writing group and engagement with nurses through the reference group and public consultation. The Australian College of Nursing has endorsed the guidelines. Nurses are essential in the management of atrial fibrillation and play a key role in

integrating these prevention, detection, and management guidelines into practice. The guidelines provide extensive recommendations and practical advice about integrated care including the role of nurses.

How are the guidelines relevant to pharmacists?

There was a pharmacist on the writing group and engagement with pharmacists through public consultation. Pharmacists have an essential part in management of atrial fibrillation and play a key role in integrating the pharmacological management sections of the guidelines into practice. In addition, the guidelines provide extensive recommendations and practical advice about integrated care including the role of pharmacists.

Do the guidelines differ significantly from international guidelines?

International guidelines have been reviewed and considered as part of the guideline writing process. However, individual recommendations can differ, and no guidelines had been developed specific to the Australian population.

These guidelines have been developed to assist Australian clinicians in the diagnosis and management of adult patients with AF. They are informed by recent evidence interpreted by local experts to optimise application in an Australian context.

The Australian guidelines differ from the 2016 European guidelines as follows

- Based on new and emerging evidence
 - Combining anticoagulants and antiplatelets in the situation of AF and ACS +/- PCI
 - The use of catheter ablation
- Based on consensus opinion:
 - Changed stroke prediction score – in nomenclature only – the sexless CHA₂DS₂-VA. (Recommended clinical thresholds for anticoagulation treatment remain the same as the European guidelines).
- More emphasis on integrated care.

How were conflicts of interest managed?

Attention has been paid to ensuring appropriate governance processes were in place, to ensure transparency, minimise bias, manage conflict of interest and limit other influences during guideline development.

For more information see the governance document at:

<https://www.heartfoundation.org.au/for-professionals/clinical-information/atrial-fibrillation>

The conflicts of interest register is available at:

<https://www.heartfoundation.org.au/for-professionals/clinical-information/atrial-fibrillation>

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