Heart Failure Guidelines 2018: Key Messages and Frequently asked questions (FAQs)

Key Messages

Statement of purpose

These guidelines for the management of heart failure (HF) provide guidance regarding the clinical care of adult patients with HF in Australia based on current evidence. They are informed by recent evidence interpreted by local experts to optimise application in an Australian context. They will assist Australian practitioners in the prevention, diagnosis and management of adult patients with HF. They are intended to replace the 2011 update of the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand (NHFA/CSANZ) Guidelines for the prevention, detection and management of chronic heart failure in Australia.2 These guidelines have been designed to facilitate the systematic integration of recommendations into HF care. This should include ongoing audit and feedback systems integrated into work practices in order to improve the quality of care and outcomes of patients with HF.

Definition

Clinician audience:

HF is a complex clinical syndrome with typical symptoms and signs that generally occur on exertion but can also occur at rest (particularly when recumbent), secondary to an abnormality of cardiac structure or function that impairs the ability of the heart to fill with blood at normal pressure or eject blood sufficient to fulfil the needs of the metabolising organs. Following the clinical diagnosis, HF is generally categorised according to whether it is associated with a reduced left ventricular ejection fraction (LVEF) below 50% (HFrEF) or preserved LVEF of 50% or more (HFpEF).

Consumer audience:

Heart failure is a condition in which the heart muscle is weakened and can’t pump as well as it normally does. The main pumping chambers of the heart (the ventricles) become larger and/or thicker and either can’t contract (squeeze) or can’t relax as well as they should. The most common causes of heart failure include coronary heart disease, previous heart attack, high blood pressure and cardiomyopathy—a disease of the heart muscle that causes the heart to enlarge and become weaker.

Heart failure and cardiovascular health

Heart failure currently affects at least 38 million people worldwide.2

Survival rates for heart failure are poor and can vary depending on the type of heart failure. For chronic heart failure, only 50 percent of patients diagnosed will be alive 5 years later.3,4
Common causes of heart failure are ischaemic heart disease, hypertension, valvular disease, and idiopathic dilated cardiomyopathy.

Most patients with heart failure have comorbidities. The burden of comorbidity increases with age, and may exacerbate the disease process and clinical severity of heart failure, impact on outcomes and interfere with optimal heart failure treatment. Comorbidity is usually associated with a worse prognosis. Common comorbidities include hypertension, ischaemic heart disease, atrial fibrillation, diabetes, kidney disease, obesity, airways disease, gout, arthritis, depression, and anaemia.

Australian profile

Population-based estimates of heart failure prevalence in Australia are limited.\(^5\),\(^6\) In 2014, it was estimated that there were 480,000 people aged 18 years or more with heart failure, representing 2.1% of the adult population.\(^7\). Furthermore, more than one in 10 persons of age 75 years and over in developed countries are afflicted with heart failure.

Given the high rates of cardiovascular risk factors and the endemic rates of rheumatic heart disease (RHD) in Australia’s Indigenous population, the age-standardised prevalence rates of heart failure in Indigenous Australians are 1.7 times higher than in non-Indigenous Australians.\(^8\) Prevalence estimates of RHD since 2000 have steadily increased to almost 2% of the Indigenous population in the Northern Territory and 3.2% of Indigenous people aged 35–44 years.\(^9\) Furthermore, Indigenous people with heart failure have more comorbidities and higher mortality than non-Indigenous, and Indigenous Australians are 1.4 times more likely to die from heart failure than non-Indigenous Australians.\(^10\) 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 2015–16, there were 173,000 hospitalisations where heart failure and cardiomyopathy were recorded as the main or additional diagnosis, representing 1.6% of all hospitalisations in Australia. Almost 40% of hospitalisations for heart failure and cardiomyopathy were recorded as the primary diagnosis. In 2012-13, $641.7 million was spent on patients admitted with heart failure.\(^11\)

In Australia, heart failure was the underlying cause of 2,958 deaths in 2016. As an underlying and contributing factor, heart failure was a factor for one in eight deaths in 2016 (20,735).\(^10\)

What is new compared to 2011 guidelines?

Prevention:
- SGLT2 inhibitors in diabetes associated with cardiovascular disease

Diagnosis and classification:
- Clearer classification of HF based on ejection fraction
- New diagnostic algorithm
- Role of CTCA, CMR, bone scintigraphy and genetic testing in workup

Pharmacological management:
- New HFrEF management algorithm
- Recommendations for angiotensin receptor neprilysin inhibitor use
- Recommendations for HF with recovered ejection fraction
Non-pharmacological (multidisciplinary) management:
• Telemonitoring/ telephone support; nurse-led medication titration
• Exercise
• Palliative care

Evidence update for devices, surgery and percutaneous procedures:
• AF ablation
• Percutaneous valve procedures
• Cardiac resynchronisation therapy
• Implantable cardioverter defibrillators

New sections
• “Nutraceuticals”
• Cardiotoxicity

Key messages – consumer

These guidelines assist health professionals to prevent, detect and manage heart failure.

The guidelines aim to improve the health of patients by providing an updated method of firstly identifying patients with heart failure and then to focus on how to manage worsening symptoms. Treatment goals are provided for both long term care and during times when patients become unwell due to their heart failure. The guidelines also consider specific advice for patients who may have multiple related medical conditions contributing to their heart failure. Patients with questions relating to their heart failure management are advised to see their doctor and discuss how these updates may apply to their individual care.

The guidelines have been updated to assist Australian health professionals to improve patient outcomes such as survival, improvement in symptoms, reduction in hospital admissions, appropriate use of the latest evidence-based care and timely diagnosis. The optimal prevention, diagnosis, and treatment strategies for heart failure 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 provide advice on involving multiple health professions to provide the care HF patients need, e.g. nurses, pharmacists, general practitioners, physicians, specialists and dietitians. A patient with heart failure is one of the authors of these guidelines. The importance of supporting patients and carers to manage their own heart failure is stressed in the guidelines, including specific recommendations and practice advice clinicians can provide to patients about fluid restriction, weight management, salt intake and exercise training.

In addition to this, the guidelines cover the spectrum of HF care, with an aim to improve patient care in the following areas:

• Definition, classification, and diagnosis of heart failure
• Prevention of heart failure
• Management of acute heart failure
• Management of chronic heart failure with medicines, multidisciplinary care, devices, and surgery
• Management of comorbidities
• Advice on heart failure caused by chemotherapy
• Palliative care
Key messages – health professionals

- Blood pressure and lipid lowering decrease the risk of developing HF. Sodium-glucose cotransporter 2 (SGLT2) inhibitors decrease the risk of HF hospitalisation in patients with type 2 diabetes and cardiovascular disease.
- An echocardiogram is recommended if HF is suspected or newly diagnosed.
- If an echocardiogram cannot be arranged in a timely fashion, measurement of plasma B-type natriuretic peptides improves diagnostic accuracy.
- Angiotensin converting enzyme (ACE) inhibitors, beta blockers and mineralocorticoid receptor antagonists improve outcomes in patients with HF associated with a reduced left ventricular ejection fraction (HFrEF). Additional treatment options in selected patients with persistent HFrEF include switching the ACE inhibitor to an angiotensin receptor nepriysin inhibitor; ivabradine; implantable cardioverter defibrillators; cardiac resynchronisation therapy; and atrial fibrillation ablation.
- Treatment strategies for HFpEF remain an evolving area with treatment aims currently focussing on improving symptoms and quality of life and decreasing hospitalisations.
- Multidisciplinary HF disease management facilitates the implementation of evidence-based HF therapies. Clinicians should also consider models of care that optimise medication titration (e.g. nurse-led titration).
- Comorbidities should be identified and managed through a structured framework which may include multidisciplinary care

Frequently asked questions (FAQs)

What are the Heart Failure Guidelines?

These guidelines for the management of heart failure (HF) provide guidance regarding the clinical care of adult patients with HF in Australia based on current evidence. They are informed by recent evidence interpreted by local experts to optimise application in an Australian context. They will assist Australian practitioners in the prevention, diagnosis and management of adult patients with HF. They are intended to replace the 2011 update of the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand (NHFA/CSANZ) Guidelines for the prevention, detection and management of chronic heart failure in Australia.1

Why have the guidelines been updated?

The optimal prevention, diagnosis, and treatment strategies for heart failure are continually evolving and care for patients requires confidence in integrating these new developments into practice. These clinical guidelines for the management of heart failure seek to provide guidance regarding the clinical care of adult patients with heart failure in Australia based on current evidence. They are intended to replace the 2011 update of the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand (NHFA/CSANZ) Guidelines for the prevention, detection and management of chronic heart failure in Australia.

For whom were the guidelines developed?

These clinical guidelines have been developed to assist Australian practitioners in the management of patients with heart failure. They are intended to be used by practising clinicians across all disciplines caring for such patients.
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/heart-failure

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 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 heart failure 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 guideline comprises a multidisciplinary group of experts including cardiologists (and electrophysiologists), nurses, general practitioners, a clinical pharmacologist and general physician, an exercise health and professional epidemiologist, and a consumer representative.

The Working Group comprised of;

Professor John Atherton (Chair), Professor Andrew Sindone, Professor Walter Abhayaratna, Professor Andrea Driscoll, A/Professor Carmine De Pasquale, Dr Ingrid Hopper, Professor Peter MacDonald, Professor Peter Kistler, Professor Phillip Newton, A/Professor Ralph Audehm, A/Professor Tom Briffa, A/Professor James Wong, Professor Liza Thomas and Ms Joan O’Loughlin.

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

- Exercise & Sports Science Australia (ESSA)
- Australasian College for Emergency Medicine (ACEM)
- Australian Cardiovascular Health and Rehabilitation Association (ACRA)
- Royal College of Pathologists of Australasia (RCPA)
- The Royal Australasian College of Physicians (RACP)
- The Royal Australian College of General Practitioners (RACGP)
- The Australian & New Zealand Society of Cardiac & Thoracic Surgeons (ANZSCTS)
- Australian College of Rural and Remote Medicine (ACRRM)
- Internal Medicine Society of Australia and New Zealand (IMSANZ)
- Australian and New Zealand Intensive Care Society (ANZICS)
Which organisations have endorsed the Guideline?

- 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 (CRANAplus)
- Australian College of Nursing (ACN)
- Australian Commission on Safety and Quality in Health Care (ACSQHC)
- The Royal College of Pathologists of Australasia (RCPA)

How are the guidelines 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 the guidelines applicable to other countries?

These guidelines have been developed for the Australian context. 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 heart failure 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 Heart Failure?

Heart failure is a condition in which the heart muscle is weakened and can’t pump as well as it normally does. The main pumping chambers of the heart (the ventricles) become larger and/or thicker and either can’t contract (squeeze) or can’t relax as well as they should. The most common causes of heart failure include coronary heart disease, previous heart attack, high blood pressure and cardiomyopathy—a disease of the heart muscle that causes the heart to enlarge and become weaker.

How many people in Australia have Heart Failure?

In 2014, it is estimated there were over 480,000 adult Australians living with heart failure, representing 2.1 percent of the adult population. Prevalence of heart failure is slightly higher for males overall than for females. Females however, more commonly present with HFpEF.

How are the guidelines relevant to GPs?

The guidelines were developed with primary care as a focus. A general practitioner was 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?

Two specialist nurses were on the writing group and there was engagement with nurses through the reference group and public consultation. The Australian College of Nursing has endorsed the guidelines. Nurses have an essential part in the management of heart failure and play a key role in integrating these prevention, detection, and management guidelines into practice. In addition, the guidelines provide extensive recommendations and practical advice about multidisciplinary care including the role of nurses.

How are the guidelines relevant to pharmacists?

There was a pharmacologist on the writing group, along with engagement of pharmacists through the public consultation phase. Pharmacists have an essential role in integrating the pharmacological management sections of the guidelines into practice. In addition, the guidelines provide extensive recommendations and practical advice about multidisciplinary care including the role of pharmacists.

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/heart-failure

The conflicts of interest register is available at: https://www.heartfoundation.org.au/for-professionals/clinical-information/heart-failure

What recommendations have been added regarding exercise for heart failure patients?

Regular performance of up to moderate intensity (i.e. breathe faster but hold conversation) continuous exercise is recommended in patients with stable chronic heart failure, to improve physical functioning and quality of life, and to decrease hospitalisation. Currently, moderate continuous endurance exercise is the best described and established form of training, because of its well-demonstrated efficacy and safety. Moderate-intensity physical activity is associated with a moderate, noticeable increase in depth and rate of breathing, while still allowing the individual to whistle or talk comfortably.

Please explain the relevance that this is the first time the evidence regarding chemotherapy and it's impacts on heart failure has been included?

With improved efficacy of cancer therapies in recent years, cancer survival rates are increasing. There are several cardiovascular complications that may (although rare) occur secondary to cancer therapies including heart failure.

It is important patients receiving chemotherapy that may be associated with cardiotoxicity are regularly monitored to allow for early detection of heart failure and early management to improve outcomes.

Patients who develop cardiotoxicity should be managed in the same way as other patients with HFrEF or asymptomatic LV systolic dysfunction.
The inclusion of practice advice surrounding chemotherapy and cardiotoxicity in the guidelines will improve coordination of care across disciplines.

Please explain the further investigation into the comorbidities of heart failure including diabetes, kidney disease, obesity, depression and sleep disorders

Most patients with heart failure have comorbidities. The burden of comorbidity increases with age, and may exacerbate the disease process and clinical severity of heart failure, impact on outcomes and interfere with optimal heart failure treatment. Comorbidities in patients with heart failure should be actively identified and managed through a structured framework. Additional recommendations are provided for comorbidities including atrial fibrillation, hypertension, and sleep disordered breathing. Practice advice is provided for obesity, airways disease and depression.

These guidelines provide recommendations around management of multiple conditions which may require a multidisciplinary approach including specialists from other fields.

What updates have there been in lifestyle advice regarding driving, travel and sex for heart failure patients?

In general, people with heart failure cannot hold an unconditional licence, and periodic medical review is required at least annually. Implantable cardiac defibrillators (ICD) pose a risk of sudden incapacity related to cardiac arrest and risk of inappropriate discharge. This risk is considered unacceptable for a commercial licence, whether the ICD is for primary or secondary prevention.

Sexual activity requires mild to moderate exertion, equivalent to three to five METs, which is similar to climbing three flights of stairs, general housework or gardening. It is reasonable to undertake sexual activity for patients with mild or no symptoms (NYHA Class I/II), but such activity should be deferred in patients with decompensated or advanced heart failure until symptomatically controlled.

Air travel is not recommended if symptoms of heart failure are poorly controlled, however patients with stable chronic heart failure and no recent changes to medication are likely to tolerate the hypoxia associated with air travel and short-distance air travel appears to be of low risk.
References