

ACC/AHA/HFSA Focused Update of the ACCF/AHA Guideline for the Management of Heart Failure: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Failure Society of America.

Summary Heart failure is a complex clinical syndrome, with diagnosis based on typical symptoms, signs and supportive investigations. Investigations may include an electrocardiogram and chest x-ray, but echocardiography is the definitive test. Plasma B-type natriuretic peptide levels may also be useful in diagnosis among patients with breathlessness, particularly as a rule-out test. Mainstay therapy for heart failure comprises lifestyle modification, pharmacotherapy and referral to a multidisciplinary heart failure program. Drug therapies focused on blockade of key activated neurohormonal systems are well established in systolic heart failure. These medications should be commenced at a low dose and slowly up-titrated to the maximal tolerated dose. In selected patients, device-based therapies are a useful adjunct in systolic heart failure. The most common of these are implantable cardioverter defibrillators and cardiac resynchronisation therapy. Most patients will receive both, as the indications overlap. Heart failure is a common condition affecting about half a million Australians. It is associated with high morbidity and mortality, frequent hospitalisation and massive cost to the health care system. There is also a subclinical population who have evidence of systolic or diastolic dysfunction but have not yet developed clinical symptoms. This group is at high risk of developing symptomatic heart failure and is therefore a target for early detection and preventive strategies. Here, we focus on the latest clinical information regarding heart failure management, particularly as it pertains to the general practitioner. The recommendations in this review closely follow those of the most recent National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand Guidelines for the prevention, detection and management of chronic heart failure in Australia. A small proportion of patients may have valvular heart disease, chronic arrhythmia, thyroid disease or HIV as the aetiological factor. Peripartum cardiomyopathy is a not infrequent presentation in young women with heart failure. Diagnosis of heart failure is often, but not always, made during a hospital presentation with new or worsened symptoms see case study in Box 1. Diagnosis is based on typical signs and symptoms, together with objective testing. A beneficial symptomatic response to heart failure therapies may also support the diagnosis. Symptoms of heart failure are multiple and overlap with many other conditions, especially in older people in whom heart failure is most prevalent. Thus, symptoms such as exertional dyspnoea, orthopnoea, paroxysmal nocturnal dyspnoea, fatigue and weakness have poor sensitivity and specificity. Similarly, signs of fluid retention, sympathetic activation eg, tachycardia and cardiac enlargement are supportive of the diagnosis, but not conclusive. Diagnostic testing will usually include an electrocardiogram ECG , chest x-ray and transthoracic echocardiography. The echocardiogram is the definitive test in the diagnosis of heart failure. In Australia, with its large rural and remote population, access to this procedure is an issue. Echocardiography provides information on ventricular size and function, as well as the presence of prior myocardial infarction, manifest as areas of hypocontractility. This information can be very useful in determining whether the underlying aetiology has an ischaemic or non-ischaemic basis. In addition, assessment of valvular structure and function, pulmonary pressures, and presence or absence of pericardial disease may be of use in guiding therapy as well as assisting in diagnosis. Newer echocardiographic techniques, such as tissue Doppler imaging, are of particular relevance in diagnosing HFPEF, 5 which is nearly always a diagnosis of exclusion. While no single test is pathognomonic of heart failure, the use of plasma levels of B-type natriuretic peptide BNP is another newer investigation that can assist in diagnosis. This test may be used for distinguishing heart failure from non-heart failure causes of shortness of breath in patients presenting in the emergency department setting. Thus, establishing normative ranges for BNP has been somewhat fraught. Nevertheless, a low BNP level has a very high negative predictive value, making it an extremely useful rule-out test for heart failure. Underpinning all therapies are lifestyle measures that have been found to be useful in supporting the patient. These include exercise usually a graded exercise program, initially under the supervision of a physiotherapist or heart failure nurse , dietary salt

restriction, alcohol restriction and weight loss in overweight patients. This is particularly critical in patients who have low serum sodium levels, which is often seen in the setting of heart failure due to activation of neurohormones such as arginine vasopressin. Appropriate treatment of commonly associated conditions, such as hypertension, arrhythmia, sleep apnoea, depression, anaemia and iron deficiency, is also critical in the optimal management of patients with heart failure. Activation of the RAAS and SNS has been found to be associated with pathogenesis and progression of the heart failure disease process, as well as with reduced survival. These agents should be initiated at low doses and up-titrated to the target or maximal tolerated dose, as per guidelines. Particularly in patients receiving ACE inhibitors for the first time, and especially those with a history of hypertension, careful and early monitoring of renal function is imperative because of the small but real possibility of bilateral renal artery stenosis. Conversely, vasodilation may offset the tendency toward early worsening of heart failure. This can be readily detected on lung function testing using pre- and post-bronchodilator spirometry. However, as combining RAAS blockers puts patients at increased risk of hyperkalaemia, hypotension and renal impairment, they should be carefully monitored for these side effects, especially during commencement of aldosterone-blocking therapy in patients with borderline hypotension, renal impairment or diabetes mellitus. Diuretics are primarily used to relieve symptoms through achievement and maintenance of euvolaemia. They have not been shown to provide prognostic benefit. Its use in sinus rhythm has waned, particularly after the publication of the Digitalis Investigation Group DIG study, which demonstrated no overall prognostic benefit. However, further analysis of the DIG study suggested that patients receiving relatively small doses within a serum digoxin range of 0. The combination of nitrates and hydralazine has been used for many years as an alternative to ACE inhibitors. The use of antiplatelet and anticoagulant therapy in heart failure is somewhat controversial. For patients with known ischaemic heart disease, aspirin and other antiplatelet agents should be continued. Device-based therapies The two main device-based therapies used in patients with heart failure are the implantable cardioverter defibrillator ICD and cardiac resynchronisation therapy CRT. Key studies supporting their use are summarised in Box 3. ICDs are indicated to reduce sudden death in high-risk patients – about half of patients with systolic heart failure die a sudden, presumed arrhythmic, death. However, many patients with a prolonged QRS interval do not have dyssynchrony, and many with a normal QRS interval do have dyssynchronous ventricles. In patients who do respond to CRT, early and marked symptomatic benefit can be seen. Newer therapies Some newer approaches to treating heart failure have been developed, and these may provide ancillary benefit to the standard therapies described above. Side effects were minimal to non-existent. Anaemia and iron deficiency are relatively common in patients with heart failure. Definitive evaluation of raising haemoglobin levels using erythropoietin-stimulating agents in patients with anaemia and heart failure is ongoing. All patients with heart failure should be investigated for ischaemic heart disease, ultimately by coronary angiography. Correction of coronary disease using surgical approaches has not been shown to provide clinical benefit compared with optimal medical therapy overall in the STICH study. Valvular heart disease should be investigated using echocardiography. Mitral regurgitation is commonly observed in heart failure, often due to dilation of the valve apparatus secondary to ventricular enlargement as part of the ongoing remodelling process. New percutaneous techniques have been developed to non-invasively minimise mitral regurgitation in the hope this will help minimise or even reverse remodelling, but these remain largely experimental. Similarly, percutaneous approaches to treating aortic stenosis are under active evaluation. Transition of care to the community Ambulatory care heart failure programs Australian guidelines recommend that patients hospitalised with an exacerbation of heart failure be referred to a heart failure program after discharge. Multidisciplinary ambulatory care programs targeting patients with heart failure reduce hospital readmission and mortality. The main objectives of these programs are listed in Box 4. Ambulatory care heart failure programs are accessible at most tertiary hospitals and many community health centres in Australia. Patients who require optimisation of pharmacotherapy or further diagnostic investigations, who have been recently hospitalised, who are exhibiting signs and symptoms of an acute exacerbation or who require further assessment for device therapy or heart transplantation will need to be seen more often even weekly in a heart failure outpatient clinic or program. Patients with stable heart failure usually only require 3–6-monthly

monitoring of their clinical status but should be referred to a heart failure exercise program. Patient education is vital and is usually provided by the heart failure nurse. Patient education provided to patients and carers should always be based on the Living well with chronic heart failure booklet developed by the National Heart Foundation of Australia. Patient and carer education focuses on disease, diet, exercise, medications, lifestyle issues and self-management strategies. Titration of medications may be done by a nurse practitioner or a heart failure nurse under the supervision of a cardiologist or through an approved titration protocol. A meta-analysis of nurse-led clinics has found an improvement in patient outcomes, including a reduction in hospital admissions and mortality. Telemonitoring involves the transmission of clinical data, such as blood pressure, weight and heart rate, through digital broadband, wireless, bluetooth or satellite technology. Although telemonitoring is ideal for patients in rural and remote areas, it is not advocated for patients in metropolitan areas who have access to ambulatory care heart failure programs. The benefits of a face-to-face interaction have been shown to far outweigh the benefits of telemonitoring. Further research is required. Shared care model Shared health care is a model of health care delivery in the primary care setting that involves collaboration among practitioners of different disciplines or with different skills and knowledge. The success of a shared care model is influenced by the quality of collaborative working relationships, as frequent communication between team members is essential. This may be through an absolute risk clinic, where general practice nurses assess and educate patients about their risk of cardiovascular disease using the absolute risk tool recommended by the National Heart Foundation of Australia. Similarly, general practice nurses could also run a heart failure clinic where they review patients and provide education about self-management. For these clinics to be successful, general practice nurses would require professional development in these areas. Conclusions Despite recent advances in its management, heart failure remains a significant health care issue in Australia. Given the size of the problem and the high cost of newer therapies, it is imposing a significant cost burden on the Australian health care system. How best to manage scarce health care resources represents a major ongoing challenge in the management of this condition. He had a longstanding history of hypertension but was otherwise well. On examination, he was found to have significant fluid overload, manifest as bibasal crackles, ascites and pitting oedema of the lower legs. A provisional diagnosis of systolic heart failure was made. Initial management Loop diuretics were introduced, initially intravenously and then orally, to clear excess fluid. He commenced a heart failure management program as an outpatient, which included education on dietary salt and alcohol restriction, an exercise program and referral to the nearest specialised heart failure clinic. The patient underwent exercise stress testing and coronary angiography to exclude underlying ischaemia, and results of both were normal. Current status There was significant symptomatic improvement after the above measures. The decision was made to initially add spironolactone, an MRA, as this drug class has been found to have a favourable stand-alone impact on all-cause mortality. This was introduced with careful ongoing scrutiny of postural symptoms, blood pressure lying and standing, renal function and serum potassium status.

Chapter 2 : Chronic heart failure in adults: management | Guidance and guidelines | NICE

In a guideline update published on May 20, , the American College of Cardiology, the American Heart Association and the Heart Failure Society of America detail the groups' recommendations for the use of two new heart failure medications.

Chapter 3 : Chronic heart failure in adults: diagnosis and management | Guidance and guidelines | NICE

Update of Guidelines for Heart Failure Management () Since , the American College of Cardiology and the American Heart Association have teamed up to provide guidelines to improve heart health.

Chapter 4 : ACC/AHA/HFSA Guideline for Management of Heart Failure Update - Heart Failure Society of

Practice Guidelines (BNP) or N-terminal pro-B-type natriuretic peptide (NT-proBNP) is useful to support clinical decision making in the diagnosis of heart failure, especially when.

Chapter 5 : Acute and Chronic Heart Failure

This guidance has been updated and relapsed by chronic heart failure in adults: diagnosis and management. heart failure in adults: management. Clinical guideline.

Chapter 6 : Heart failure clinical guidelines and resources for professionals | The Heart Foundation

ACC/AHA/HFSA Focused Update on New Pharmacological Therapy for Heart Failure: An Update of the ACCF/AHA Guideline for the Management of Heart Failure: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Failure Society of America.

Chapter 7 : Heart Failure - American Family Physician

The Heart Failure Guideline is a thorough reassessment of heart failure diagnosis and management that goes beyond the previous Heart Failure Guideline and corresponding focused update. To draft the document, the ACC and AHA selected a multidisciplinary group of experts in cardiac care and asked them to perform a comprehensive.

Chapter 8 : ACC/AHA Update Guideline for Management of Heart Failure | DAIC

The American College of Cardiology (ACC), the American Heart Association (AHA), and the Heart Failure Society of America (HFSA), have jointly issued an update of the ACCF/AHA guidelines for the management of heart failure (HF).

Chapter 9 : End-Stage Heart Failure Protocol and Guidelines | Queensland Health

guidelines on heart failure from NICE in and from the European Society of Cardiology in Since the publication of SIGN 95, important new evidence has emerged for the management of heart failure.