

Cardiology Practice Review™

Making Education Easy

Issue 31 - 2023

In this issue:

- > 2023 ESC cardiomyopathy guidelines
- > Exercise and physical activity in cardiac rehabilitation
- > Focused update of ESC heart failure guidelines
- > 2023 ESC guidelines for patients with CVD and diabetes
- > Screening for hypertensive disorders of pregnancy
- > CVD in women
- > 60-day prescriptions of PBS medicines
- > Statin intolerance: An overview of US and international guidance
- > Cuff size affects the accuracy of BP readings
- > Shared decision-making in international CV guidelines
- > Temperature management for comatose adult survivors of cardiac arrest
- > COVID-19 resources
- > Conferences, workshops and CPD

Abbreviations used in this issue:

ACC = American College of Cardiology;
ACRA = Australian Cardiovascular Health and Rehabilitation Association;
AHA = American Heart Association; **ASCVD** = atherosclerotic cardiovascular disease;
BP = blood pressure; **CHD** = coronary heart disease;
CSANZ = Cardiac Society of Australia and New Zealand; **CV** = cardiovascular;
CVD = cardiovascular disease; **ESC** = European Society of Cardiology;
HbA1c = haemoglobin A1c; **HF** = heart failure;
HFmrEF = HF and mildly reduced ejection fraction;
HFpEF = HF and preserved ejection fraction; **HFREF** = HF with reduced ejection fraction;
MICT = moderate-intensity continuous training; **PBS** = Pharmaceutical Benefits Scheme;
PCK9 = proprotein convertase subtilisin/kexin type 9;
SGLT2 = sodium-glucose cotransporter-2; **SAMS** = statin-associated muscle symptoms;
SDM = shared decision-making; **T2DM** = type 2 diabetes mellitus;
TOD = target organ damage; **USPSTF** = United States Preventive Services Task Force.

Welcome to the 31st issue of Cardiology Practice Review.

This Review covers news and issues relevant to clinical practice in cardiology. It will bring you the latest updates, both locally and from around the globe, in relation to topics such as new and updated treatment guidelines, changes to medicines reimbursement and licensing, educational, professional body news and more. Finally, on the back cover, you will find our COVID-19 resources for Cardiologists and a summary of upcoming local and international educational opportunities, including workshops, webinars, and conferences.

We hope you enjoy this Research Review publication and look forward to hearing your comments and feedback.

Kind Regards,

Dr Janette Tenne
Editor

janette.tenne@researchreview.com.au

Clinical Practice

2023 ESC cardiomyopathy guidelines

Cardiomyopathies are a diverse group of heart muscle diseases that require nuanced management tailored to individual patients. A new guideline on diagnosing and managing cardiomyopathies was launched at the 2023 ESC Congress, which took place in August.

Although detailed descriptions and recommendations for each individual cardiomyopathy phenotype were beyond the scope of this guideline, the key recommendations are as follows:

- Diagnosis should begin with a careful assessment of the patient's symptoms, family history, clinical examination, and various diagnostic tests, including electrocardiography, imaging, and laboratory investigations. Multimodality imaging, including cardiac magnetic resonance and scintigraphy, plays a vital role in characterising the cardiac phenotype and detecting specific abnormalities.
- A phenotype-based approach to diagnosis, focusing on the predominant clinical presentation, is recommended. Genetic testing is essential, and genetic counselling should be offered to patients and their families as it can influence risk stratification and management.
- Management involves symptom relief, risk assessment, and prevention of complications such as sudden cardiac death, heart failure (HF), and stroke. Cardiac myosin inhibitors like mavacamten are considered for specific cases, and validated risk-prediction tools aid in preventing sudden death.
- Exercise recommendations should be individualised, considering the patient's genotype, phenotype, and risk factors. High-risk patients may need to avoid competitive sports.
- In paediatric cases, cardiomyopathies often have severe phenotypes and higher infant morbidity and mortality. Beyond the first year of life, genetic causes of childhood-onset cardiomyopathies align with those in adults.
- A multidisciplinary approach is crucial for patient care, including transitioning from paediatric to adult cardiomyopathy services. Specialised investigations are necessary before elective invasive procedures in high-risk patients.
- Managing risk factors and associated conditions is integral to the care of patients with cardiomyopathies. Pregnancy and the post-partum period pose increased cardiovascular (CV) risks in women with known cardiomyopathy, requiring careful evaluation and monitoring.

<https://tinyurl.com/5mxfb9sy>

World-first clinical trials begin for promising new anti-clotting stroke drug

Stroke is a leading cause of death and disability globally, with limited emergency treatment options. The Heart Research Institute has made a breakthrough 25 years in the making, identifying and developing a new anti-clotting drug that shows great promise to treat stroke – and have now launched Phase II clinical trials in 80 stroke patients in six leading hospitals across Australia.



Exercise and physical activity in cardiac rehabilitation

Cardiovascular disease (CVD) places a significant burden on individuals and healthcare systems alike. Patients with CVD stand to benefit substantially from cardiac rehabilitation, which comprises structured exercise and physical activity as core components. The CSANZ Position Statement offers contemporary, evidence-based guidance for clinicians engaged in cardiac rehabilitation in Australia. It acknowledges the latest international guidelines, scientific evidence, and the increasing use of technology and virtual delivery methods in an evolving healthcare landscape. The guidelines are patient-centric, emphasising a personalised assessment and prescription of aerobic exercise, resistance exercise, and physical activity while addressing progression and safety considerations.

The key recommendations are listed below:

- **Comprehensive individual assessment:** A thorough evaluation of aerobic exercise capacity, muscle strength, and physical activity levels will lead to effective rehabilitation. A comprehensive assessment will allow limiting factors to be identified and guide the safe prescription of personalised exercise regimens tailored to the patient's abilities, needs, preferences, and goals.
- **Monitoring and evaluation:** To gauge the patient's response to exercise and physical activity accurately, assessments of aerobic exercise capacity, muscle strength, and physical activity should be conducted both at enrolment and discharge. This ongoing evaluation informs the determination of target exercise intensities during their program and allows for the measurement of program effectiveness.
- **Exercise variety:** Cardiac rehabilitation should encompass a diverse range of exercise and physical activity options. The overarching goal is to achieve moderate-to-vigorous intensity exercise and physical activity, as this offers optimal health benefits and aids in the prevention of recurrent CV events.
- **Exercise modalities:** While moderate-intensity continuous training (MICT) is well-established as safe and effective for cardiac patients, emerging evidence suggests that high-intensity interval training can be well-tolerated by select cardiac patient groups, offering potential improvements in aerobic exercise capacity beyond what MICT can achieve in certain cases.
- **Leveraging technology:** To enhance patient support, consider making use of available resources such as wearable activity trackers and telehealth. These tools have the potential to increase patient engagement, improve quality of life, empower patients to self-monitor and manage their symptoms, and boost their confidence in maintaining long-term physical activity.

<https://tinyurl.com/3ue8senh>

Focused update of ESC heart failure guidelines

The 2023 Focused Update on the management of HF builds upon the 2021 ESC Guidelines and incorporates new evidence from recent randomised controlled trials. The update primarily focuses on refining treatment recommendations based on this new evidence.

Key recommendations from the update include:

- **SGLT2 inhibitors in HFmrEF and HFpEF:** The use of sodium-glucose cotransporter-2 (SGLT2) inhibitors, such as dapagliflozin or empagliflozin, is recommended for patients with HFmrEF to reduce the risk of HF hospitalisation or CV death. Additionally, SGLT2 inhibitors are recommended for patients with HFpEF to achieve the same risk reduction.
- **Intensive strategy post-HF hospitalisation:** An intensive treatment strategy involving the initiation and rapid up-titration of evidence-based medications before discharge and during the first 6 weeks following an HF hospitalisation is recommended. This approach aims to reduce the risk of HF rehospitalisation or death.
- **SGLT2 inhibitors and finerenone in diabetes and chronic kidney disease (CKD):** In patients with type 2 diabetes mellitus (T2DM) and CKD, SGLT2 inhibitors (dapagliflozin or empagliflozin) are recommended to lower the risk of HF hospitalisation or CV death. Additionally, finerenone is recommended for these patients to reduce the risk of HF hospitalisation.
- **Intravenous iron supplementation:** Symptomatic patients with HFrEF and HFmrEF who also have iron deficiency are advised to receive intravenous iron supplementation. This treatment helps alleviate HF symptoms and enhances the patient's quality of life. Ferric carboxymaltose or ferric derisomaltose should be considered for intravenous iron supplementation in these patients to reduce the risk of HF hospitalisation.

The update maintains the terminology of HFpEF while allowing for potential terminology changes in future guidelines. These recommendations serve as valuable guidance for healthcare professionals in optimising care for patients with HF.

<https://tinyurl.com/29ca3mrm>

2023 ESC guidelines for managing CVD in patients with diabetes

The 2023 ESC Guidelines for the management of CVD in patients with diabetes strongly emphasise patient-centred and evidence-based approaches to managing T2DM. Rather than solely relying on haemoglobin A1C (HbA1c) levels, these guidelines prioritise a holistic assessment of the clinical picture and the risk of cardio-renal complications in individual patients. The primary therapeutic objectives for patients with diabetes and atherosclerotic CVD (ASCVD) or elevated CV risk include organ protection and improved prognosis.

These guidelines draw upon extensive data from recent large CV outcome trials to provide recommendations for reducing CV risk and managing cardio-renal complications in patients with T2DM. While there is substantial data for patients with T2DM and ASCVD, the guidelines also address the need for clear recommendations in patients without ASCVD or severe target organ damage (TOD). To address this, the guidelines introduce a risk stratification tool called SCORE2-Diabetes, which predicts the 10-year risk of fatal and non-fatal CV events (myocardial infarction and stroke) in patients without ASCVD or severe TOD.

Some key recommendations from these guidelines include:

- Diagnosis of diabetes using fasting or random glucose levels, elevated HbA1c, or an abnormal oral glucose tolerance test.
- Screening for diabetes in all individuals with CVD, including HF, using HbA1c and/or fasting glucose.
- CV risk assessment for all diabetes patients, including evaluation for ASCVD and severe TOD.
- Lifestyle interventions such as smoking cessation, exercise promotion, weight management, and adherence to the Mediterranean diet.
- Glycaemic control tailored to individual patients to reduce microvascular and macrovascular complications while avoiding hypoglycaemia.
- Glucose-lowering therapies, especially SGLT2 inhibitors and GLP-1 receptor agonists, for patients with diabetes and ASCVD.
- Blood pressure (BP) management with individualised targets and use of multiple drug therapies when necessary.
- Statins as first-line therapy for reducing LDL cholesterol levels, with additional use of ezetimibe and PCSK9 inhibitors if needed.
- Antiplatelet agents for patients with diabetes based on ASCVD and CV risk assessment.
- A multifactorial approach to patient care, emphasising lifestyle counselling and continuous, multidisciplinary support.
- Management strategies for specific complications, including coronary artery disease, HF, arrhythmias, CKD, and peripheral arterial diseases.
- A focus on person-centred care, emphasising patient education, motivation, empowerment, and ongoing support.

<https://tinyurl.com/24xcr866>

Kindly Supported by



Claim CPD/CME points [Click here](#) for more info.

FOR AUSTRALIAN HEALTHCARE PROFESSIONALS

GSK

IF YOU COULD HELP PREVENT SHINGLES, WHY WOULDN'T YOU?¹

HELP PREVENT
SHINGLES AND
PHN in your adult
patients at increased
risk of shingles, with
SHINGRIX¹

Not a real patient, for illustrative purposes only.
Not representative of every patient's experience.
PHN=post-herpetic neuralgia.

Indication¹: SHINGRIX is indicated for the prevention of herpes zoster (HZ) and post-herpetic neuralgia in:

- adults 50 years of age or older;
- adults 18 years of age or older at increased risk of HZ.

Dosing¹: The primary vaccination schedule consists of two doses; an initial dose, followed by a second dose 2 to 6 months later. For subjects who are immunodeficient, immunosuppressed or likely to become immunosuppressed due to known disease or therapy, and who would benefit from a shorter vaccination schedule, the second dose can be given 1-2 months after the initial dose.

Safety¹: Very common (≥10%) solicited local adverse reactions and solicited general adverse events were pain, redness, and swelling at the injection site; and myalgia, fatigue, headache, shivering, fever, and gastrointestinal symptoms, respectively.

PBS Information:
This product is not listed on the PBS or the
National Immunisation Program (NIP).



Please review full Product Information before prescribing. Product Information can be accessed at www.gsk.com.au/shingrix or by scanning the QR code.

⚠ This medicinal product is subject to additional monitoring in Australia. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse events at www.tga.gov.au/reporting-problems.

HZ=herpes zoster

Reference: 1. SHINGRIX Approved Product Information.

For information on GSK products or to report an adverse event involving a GSK product, please contact GSK Medical Information on 1800 033 109. Trade marks are owned by or licensed to the GSK group of companies. © 2023 GSK group of companies or its licensors. GlaxoSmithKline Australia Pty Ltd, Melbourne, VIC. ABN 47 100 162 481. PM-AU-SGX-ADVT-230003. Date of approval: February 2023.



SHINGRIX
Recombinant Varicella Zoster Virus glycoprotein E antigen
(AS01_b adjuvanted vaccine)

Screening for hypertensive disorders of pregnancy

Hypertensive disorders are one of the primary drivers of maternal morbidity and mortality, as well as adverse perinatal outcomes for the foetus and newborn. The prevalence of hypertensive disorders of pregnancy has shown an upward trajectory over the past few decades in the US. Cases have surged from roughly 500 cases per 10,000 deliveries in 1993 to 1,021 cases per 10,000 deliveries in the period spanning 2016–2017. Thus, the United States Preventive Services Task Force (USPSTF) undertook a comprehensive systematic review of the advantages and potential drawbacks associated with hypertensive disorder screening during pregnancy.

Following a thorough analysis, the USPSTF endorses and advocates for the routine screening of pregnant individuals for hypertensive disorders throughout the entirety of their pregnancy journey. This recommendation encompasses pregnant individuals who have not received a prior diagnosis of a hypertensive disorder of pregnancy or chronic hypertension.

Table 1. Clinician Summary: Screening for hypertensive disorders of pregnancy.

What does the USPSTF recommend?	Screen pregnant people for hypertensive disorders of pregnancy with BP measurements throughout pregnancy.
To whom does this recommendation apply?	This applies to individuals without a known diagnosis of a hypertensive disorder of pregnancy or chronic hypertension.
How to implement this recommendation?	BP measurements should be obtained during each prenatal care visit throughout pregnancy. If a patient has an elevated BP reading, the reading should be confirmed with repeated measurements. To achieve the benefit of screening, it is important that persons who screen positive receive evidence-based management of hypertensive disorders of pregnancy.
What additional information should clinicians know about this recommendation?	While it is known that risk continues into the immediate postpartum period, there is little evidence regarding screening during this period. A pragmatic approach would be for patients to be counselled regarding signs and symptoms of preeclampsia at hospital discharge and for patients with hypertensive disorders to have subsequent BP checks.
What are other relevant USPSTF recommendations?	The USPSTF recommends the use of low-dose aspirin (81 mg/d) as preventive medication after 12 weeks of gestation in persons at high risk for preeclampsia.

By taking this proactive approach, healthcare providers can contribute significantly to the early detection and management of hypertensive disorders, thereby safeguarding the health and well-being of both mothers and their unborn children.

<https://tinyurl.com/4j2n6mwc>

CVD in women

In Australia, coronary heart disease (CHD) claims the lives of approximately 20 women each day, which is nearly three times the number of deaths caused by breast cancer. Indigenous women are up to twice as likely to develop CVD and succumb to CHD or stroke than non-Indigenous women. Despite these alarming statistics, CVD in women has historically been underdiagnosed, undertreated, and under-recognised. Advancements in understanding sex-specific risk factors and differences in CVD presentation, treatment, and outcomes are vital to ensuring equitable preventive and secondary CVD treatment for women. This increased awareness can contribute to reducing the gender gap in CVD diagnosis and care.

Associate Professor Sarah Zaman, an Academic Interventional Cardiologist at the University of Sydney and Westmead Hospital, highlights the following points:

- **Gender disparities:** Women with hypertension often lack adequate BP control, and women with hyperlipidaemia receive preventive medications like statins at lower rates compared to men. Moreover, women tend to be less physically active than men, a trend that worsens with age.
- **Emerging risk factors:** Emerging risk factors for CVD in women include hypertensive disorders of pregnancy, pre-eclampsia, gestational diabetes, pre-term birth, and early or premature menopause. These factors can substantially increase the risk of CVD, independent of traditional risk factors, with heart disease manifesting as early as the 40s.
- **Routine tests:** To identify individuals at risk, heart health checks or absolute CVD risk assessments should be considered for those aged ≥ 45 years (or ≥ 30 years for First Nations people). The assessment considers various factors, including age, sex, BP, smoking status, cholesterol levels, diabetes, and ECG findings.
- **CT coronary artery calcium scoring test:** This low-dose radiation test helps identify calcified cholesterol plaque in the heart arteries. The presence of calcium in women in their 40s or 50s is considered abnormal and may prompt intensive medical therapy.
- **Heart attack symptoms:** Understanding gender differences in heart attack symptoms is crucial. While chest pain is the most common symptom in both genders, women may also present with symptoms like dizziness, nausea, and vomiting. These additional symptoms can sometimes divert attention from the primary symptom, chest pain.
- **Menopause and heart health:** Changes that occur during menopause significantly contribute to an increase in CVD risk. Early or premature menopause is linked to higher all-cause mortality and CVD-specific mortality. Hormone therapy may be recommended for women in this category.

<https://tinyurl.com/2z5h5wh3>

Regulatory News

60-day prescriptions of PBS medicines

Patients can now receive twice the medication for the cost of a single prescription with the 60-day prescriptions for nearly 100 common medicines listed on the Pharmaceutical Benefits Scheme (PBS). This includes medications for:

- CVD
- HF
- high cholesterol
- hypertension

To qualify, patients must be:

- living with an ongoing health condition
- assessed by their prescriber to be stable on their current medicine/medicines
- have discussed with their prescriber and obtained a new prescription for a 60-day quantity of medicine per dispensing.

The Department of Health is finalising the order of medicines that will be available in *Stage 2* and *Stage 3*.

<https://tinyurl.com/3hp7bbcn>

News in Brief

Statin intolerance: An overview of US and international guidance

Statin therapy remains crucial for preventing ASCVD. Although usually well tolerated, some patients may occasionally experience statin-associated muscle symptoms, including muscle pain, weakness, cramps, and fatigue. A recent study addressed differences in international guidelines, emphasising the need for consistent diagnostic criteria. The findings suggest that healthcare teams should evaluate, educate, and consider statin rechallenge and non-statin therapies, especially for high-risk patients, to improve care and outcomes.

<https://tinyurl.com/mryn3e68>

Cuff size affects the accuracy of BP readings

Using a regular-sized BP cuff for all individuals, regardless of their arm size, leads to significant inaccuracies in BP readings with automated devices. In a randomised crossover trial of 195 adults, when a regular cuff was used on individuals needing a small cuff, systolic BP was 3.6 mmHg lower. Conversely, for those needing large or extra-large cuffs, systolic BP readings were 4.8 mmHg and 19.5 mmHg higher, respectively. These findings highlight the importance of selecting the right-sized BP cuff, especially for individuals with larger arms.

<https://tinyurl.com/3kaxdkx2>

Shared decision-making in international CV guidelines

A cross-sectional study examined the integration of shared decision-making (SDM) in contemporary CV guidelines. Out of 2,655 pharmacotherapy recommendations across 65 guidelines published from 2012 to 2022, only 6% incorporated SDM. The proportion was consistent among different CV societies and did not show a significant change over time. Additionally, a mere 3% of SDM recommendations were impartial and supported by decision aids. These findings underscore that while many guidelines mention the importance of SDM, it is infrequently incorporated and inadequately facilitated in practice.

<https://tinyurl.com/mvfa8zrk>

Temperature management for comatose adult survivors of cardiac arrest

The recommended range for targeted temperature management, which is crucial for post-cardiac arrest care, has shifted over the years. Recent trials, including TTM2 in 2021, found no extra benefits in cooling patients to 33°C compared with strict normothermia. A recently published expert opinion offers insights to reconsider current clinical practices based on these findings, which can be incorporated into future guidelines.

<https://tinyurl.com/mwuw3n5r>

RACP MyCPD participants can claim the time spent reading and evaluating research reviews as CPD in the online **MyCPD program**.

Please contact MyCPD@raccp.edu.au for any assistance.

COVID-19 Resources for Cardiologists

CSANZ <https://tinyurl.com/y3xp2729>

ACC <https://tinyurl.com/y68aud3a>

ESC <https://tinyurl.com/wn3fst>

Conferences, Workshops, and CPD

Please click on the links below for upcoming local and international cardiology meetings, workshops, and CPD.

ACRA <https://tinyurl.com/y4yj8xb5>

CSANZ <https://tinyurl.com/3mwt5tr>

Cardiac Skills Australia <https://tinyurl.com/7hx6zmdt>

Heart Foundation <https://tinyurl.com/y34smdoz>

Australian Centre for Heart Health <https://tinyurl.com/e2yjcreu>

ACC <https://tinyurl.com/y2khytpz>

AHA <https://tinyurl.com/zajc9a7>

ESC Congresses and Events <https://tinyurl.com/y6ko68yf>

ESC Education <https://tinyurl.com/y3zj3p3o>

Research Review Publications

[Finerenone use to delay progressive decline of kidney function in adults with T2DM-associated CKD](#)

[Acute Coronary Syndrome Research Review](#) with Professor John French

[Atrial Fibrillation Research Review](#) with Dr Andre Catanchin

[Cardiology Research Review](#) with Associate Professor John Amerena

[Heart Failure Research Review](#) with Professor John Atherton, Professor Andrew Coats, and Dr Mark Nolan

[Interventional Cardiology Research Review](#) with Conjoint Professor Craig Juergens



30 NOV - 1 DEC 2023

STEM-ming cardiovascular disease:
Improving patient care through multidisciplinary approaches

REGISTER NOW!
www.sydneycvsymposium.org.au

Venue: Susan Wakil Health Building, The University of Sydney

Princesses' Lecture: Prof David Kaye, Baker Heart & Diabetes Institute

Sydney CV Symposium Lecture: Prof Alta Schutte, The George Institute for Global Health



Australian Research Review subscribers can claim CPD/CME points for time spent reading our reviews from a wide range of local medical and nursing colleges. Find out more on our [CPD page](#).

Practice Reviews cover news and issues relevant to Australian clinical practice.

Research Review Australia Pty Ltd is an independent Australian publisher. Research Review receives funding from a variety of sources including Government depts., health product companies, insurers and other organisations with an interest in health. Journal content is created independently of sponsor companies with assistance from leading local specialists. **Privacy Policy:** Research Review will record your email details on a secure database and will not release them to anyone without your prior approval. Research Review and you have the right to inspect, update or delete your details at any time. **Disclaimer:** This publication is not intended as a replacement for regular medical education but to assist in the process. The reviews are a summarised interpretation of the published study and reflect the opinion of the writer rather than those of the research group or scientific journal. It is suggested readers review the full trial data before forming a final conclusion on its merits. To contact Research Review Australia, please email geoff@researchreview.com.au.

Research Review publications are intended for Australian health professionals.

