Cardiology Practice Review™

Making Education Easy

Issue 22 - 2022

In this issue:

Abbreviations used in this issue:

ATAGI = Australian Technical Advisory Group on Immunisation
MBS = Medicare Benefits Schedule

Claim CPD/CME points Click here for more info.

Research Review Australia is now on Linked-in. Follow us to keep up to date.

RACP MyCPD Program participants can claim **one credit per hour** (maximum of 60 credits per year in Category One – Educational Activities) **for reading and evaluating Research Reviews.**

Please CLICK HERE to download CPD Information

Welcome to the 22nd 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, medicolegal issues, professional body news and more. And 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

Management of infective endocarditis in people who inject drugs: A scientific statement from the American Heart Association

Prompted by the large increase in the occurrence of infective endocarditis cases among people who inject drugs, the American Heart Association (AHA) has published a scientific statement focusing solely on this unique patient population. The statement provides a more in-depth description of the management of infective endocarditis among this population than what has been provided in prior AHA infective endocarditis-related guidelines.

The writing group advises a multidisciplinary team care approach that includes cardiologists, cardiac surgeons, and infectious diseases specialists as well as addiction medicine or addiction psychiatry specialists, pharmacists, social workers, and nurse specialists. Clinical teams should acknowledge that substance use disorder is a treatable chronic, relapsing medical illness and many people are able to achieve sustained remission, particularly when they receive effective treatments. Although not all patients with injection drug-related infective endocarditis have opioid addiction, for those who do, the best practice is to offer buprenorphine or methadone as soon as possible after the patient presents to the hospital.

It is reasonable to offer people with injection drug-related infective endocarditis standard treatment, which is 6 weeks of intravenous antibiotics. However, this regimen is often not feasible in this patient population and there is increasing evidence that partial intravenous therapy followed by oral antibiotic treatment to complete a total of 6 weeks may be a more feasible option.

Preventive measures are critical in patients who are successfully treated for an initial bout of infective endocarditis because they remain at extremely high risk for subsequent bouts of infective endocarditis, regardless of whether injection drug use is continued.

The writing group also points out that people with infective endocarditis who inject drugs should be considered for heart valve repair or replacement surgery regardless of current drug use if they have indications for valve surgery.

The writing group acknowledges that while addiction medicine and addiction psychiatry expertise are critical to managing infective endocarditis in injection drug users, these specific resources are often not widely available. They urge healthcare systems to attract health care professionals with addiction training, particularly in centres where drug use-related infective endocarditis is common and expected to continue to increase.

The scientific statement was prepared by the volunteer writing group on behalf of the AHA Rheumatic Fever, Endocarditis and Kawasaki Disease Committee of the Council on Lifelong Congenital Heart Disease and Heart Health in the Young; the Council on Cardiovascular Surgery and Anesthesia; the Council on Cardiovascular and Stroke Nursing; the Council on Clinical Cardiology; and the Council on Peripheral Vascular Disease.

https://tinyurl.com/yc2n36kw

American College of Cardiology expert consensus decision pathway on the role of nonstatin therapies for LDL-cholesterol lowering in the management of atherosclerotic cardiovascular disease risk

A new ACC Expert Consensus Decision Pathway provides practical guidance for use of nonstatin therapies for LDL-cholesterol lowering in the management of atherosclerotic cardiovascular disease (ASCVD) risk. The document aims to address situations regarding use of newer nonstatin therapies not covered by the 2018 AHA/ACC cholesterol guideline.

Specifically, the document provides algorithms that endorse the four evidence-based patient management groups identified in the guidelines and assume that the patient is currently taking or has attempted to take a statin, given that this is the most effective initial therapy. Key recommendations address patients with clinical ASCVD at very high-risk and patients with clinical ASCVD and clinical diagnosis or genetic confirmation of familial hypercholesterolaemia, as well as patients with clinical ASCVD not at very high risk, primary prevention patients with and without diabetes, and patients with evidence of subclinical atherosclerosis on imaging studies.

Factors that should be considered in terms of management include adherence to lifestyle modifications and evidence-based, guideline-recommended statin treatment; risk-enhancing factors; control of risk factors; the potential benefits and potential harms; and patient preference with respect to the addition of nonstatin therapies. Optional interventions that can be considered include referral to a lipid specialist and registered dietician, ezetimibe, bile acid sequestrants, proprotein convertase subtilisin/kexin type 9 monoclonal antibodies, bempedoic acid, and inclisiran.

https://tinyurl.com/2yt5jkdn

European Society of Cardiology/European Respiratory Society guidelines for the diagnosis and treatment of pulmonary hypertension

The European Society of Cardiology and European Respiratory Society have updated their guidelines for the diagnosis and treatment of pulmonary hypertension (PH). A summary of changes is described below.

PH is still classified into five groups: group 1, pulmonary arterial hypertension (PAH); group 2, PH associated with left heart disease; group 3, PH associated with chronic lung disease; group 4, chronic thromboembolic pulmonary hypertension (CTEPH), often with a history of PE; group 5, PH with unclear and/or multiple causes.

- One of the key suggestions from the 6th World Symposium on Pulmonary Hypertension was to reconsider the haemodynamic definition of PH. Consequently, PH is now defined by a mean pulmonary arterial pressure >20 mm Hg at rest. The definition of PAH also implies a pulmonary vascular resistance >2 Wood Units and pulmonary arterial wedge pressure ≤15 mm Hg.
- The main diagnostic algorithm for PH has been simplified and now follows a three-step approach: suspicion by first-line physicians; detection by echocardiography; and confirmation with right heart catheterisation in PH centres.
- An improved recognition of CT and echocardiographic signs of CTEPH at the time of an acute PE event, together with a systematic follow-up of patients with acute PE, should help to reduce the underdiagnosis of CTEPH.
- The treatment algorithm for PAH has been simplified, with a focus on risk assessment, cardiopulmonary comorbidities, and treatment goals. Initial combination therapy and treatment escalation at follow-up when appropriate are current standards.
- The guidelines attempt to close the gap between paediatric and adult PAH care, with management strategies based on risk stratification and treatment response, extrapolated from that in adults but adapted for age.
- The recommendations on sex-related issues in patients with PAH, including pregnancy, have been updated. Women with PH who become pregnant or present during pregnancy with newly diagnosed PAH should be treated in centres with a multidisciplinary team experienced in managing PH in pregnancy. It is recommended to stop endothelin receptor antagonists, riociguat, and selexipag because of potential teratogenicity. Despite limited evidence, calcium channel blockers, phosphodiesterase 5 inhibitors, and inhaled/IV/subcutaneous prostacyclin analogues are considered safe during pregnancy.
- The recommendations for rehabilitation and exercise programs in PH have been updated. Patients with PAH should receive pharmacological treatment and be in a stable clinical condition before undertaking a supervised rehabilitation program.
- There is a new treatment recommendation for PH in group 3 PH; PDE5 inhibitors may be considered in patients with severe PH associated with interstitial lung disease with individual decision-making in PH centres.
- In group 4 PH, the term chronic thrombo-embolic pulmonary disease (CTEPD) with or without PH has been introduced, reflecting the presence of similar symptoms, perfusion defects, and organised fibrotic obstructions in patients with or without PH at rest.
- The treatment algorithm for CTEPH has been updated, including multimodal therapy with surgery, PH drugs, and balloon pulmonary angioplasty.

https://tinyurl.com/27mxctnh

Cardiac computed tomographic imaging in cardio-oncology: An expert consensus statement from the Society of Cardiovascular Computed Tomography, endorsed by the International Cardio-Oncology Society

The Society of Cardiovascular Computed Tomography has published an expert consensus statement to guide use of cardiac computed tomography (CCT) in the management of cardio-oncology patients. The statement addresses current gaps in recommendations on the role of CCT in cancer patients in many existing guidelines and consensus statements. The statement provides recommendations from experts in cardiology, radiology, cardiovascular imaging, cardio-oncology, and radiation oncology. The number of long-term cancer survivors has been rapidly growing. Furthermore, many new cancer therapies affect the heart, and cardiovascular disease (CVD) is the leading cause of illness and death among adult cancer survivors.

The statement recommends a comprehensive baseline evaluation to screen for, and subsequently optimise, any underlying atherosclerotic cardiovascular disease (ASCVD) risk factors for all patients with cancer and cancer survivors. A review of previous noncardiac chest CT reports and/or images is highly recommended to assess for subclinical ASCVD. If there is evidence of coronary artery calcium (CAC) in a patient without history of ASCVD, steps should be taken to improve CV risk stratification and reduce ASCVD risk. Another recommendation is for radiologists and nuclear medicine physicians to make note of the presence or absence of CAC in their reports and consider assessment of CAC burden in noncontrast, nongated CT scans.

https://tinyurl.com/2u975y7w

ATAGI recommendations on COVID-19 vaccine use in children aged 6 months to <5 years

The Australian Technical Advisory Group on Immunisation (ATAGI) now recommends COVID-19 vaccination for children aged 6 months to <5 years with severe immunocompromise, disability, and those who have complex and/or multiple health conditions which increase the risk of severe COVID-19. These include children with the following conditions:

- Complex congenital cardiac disease;
- Chronic neurological or neuromuscular conditions;
- A disability that requires frequent assistance with activities of daily living, such as severe cerebral palsy or Down Syndrome (Trisomy 21).
- Severe primary or secondary immunodeficiency, including those undergoing treatment for cancer, or on immunosuppressive treatments as listed in the ATAGI advice on 3rd primary doses of COVID-19 vaccine in individuals who are severely immunocompromised;
- Bone marrow or stem cell transplant, or chimeric antigen T-cell (CAR-T) therapy;
- Structural airway anomalies or chronic lung disease;
- Type 1 diabetes mellitus;

The recommendation is for two primary doses, except for those with severe immunocompromise who require three primary doses. The recommended interval between each dose is 8 weeks.

A paediatric formulation of the Moderna COVID-19 vaccine (Spikevax) was provisionally approved by the Therapeutic Goods Administration (TGA) on 19 July 2022 for use in children aged 6 months to 5 years and can be used for children aged 6 months to <5 years in the above categories.

ATAGI does not currently recommend vaccination for children aged 6 months to <5 years who are **not** in the above risk categories for severe COVID-19.

https://tinyurl.com/4fk5pp87

Regulatory News

MBS news

From 1 November 2022, there will be a number of changes to the MBS. **Cardiothoracic** changes will be made for the amendment of eight cardiothoracic surgery items (38510, 38513, 38516, 38517, 38555, 38556, 38557 and 38572) to ensure that these items align with best practice. **Cardiac implantable loop recorder devices** changes will be made for the introduction of two new items (11736 and 11737) for the monitoring of electrical activity of the heart, continuously storing information as electrocardiograms and recording abnormal activity such as arrhythmias.

https://tinyurl.com/2287p463

News in Brief

Statins and mortality in COVID-19

This systematic review and meta-analysis examined the association between statin use and mortality in patients with COVID-19 by pooling adjusted effect estimates from eight propensity-score matching studies (n = 14,446). Statin use at the time of COVID-19 infection decreased COVID-19 mortality (RR 0.72; P=0.018). Subgroup analysis of in-hospital statin recipients also suggested that it was associated with lower mortality (RR 0.71; P=0.030). The association was not affected by age, male gender, or hypertension.

https://tinyurl.com/nshxw9hv

Association of rosuvastatin use with risk of haematuria and proteinuria

This was a real-world study of 152,101 new users of rosuvastatin and 795,799 new users of atorvastatin from 2011 to 2019. Rosuvastatin use was associated with increased risks for haematuria, proteinuria, and kidney failure with replacement therapy compared with atorvastatin (HRs 1.08, 1.17, and 1.15, respectively). Forty-four percent of patients with EGFR <30 mL/min/1.73 m^2 were prescribed high-dose rosuvastatin (20 or 40 mg daily) despite current US labelling suggesting a dosage reduction (maximum daily dose 10 mg) for patients with severe chronic kidney disease. This study is important for clinical practice, with these data suggesting greater care is needed in prescribing and monitoring rosuvastatin, particularly in patients who are on high doses, or who have severe chronic kidney disease.

https://tinyurl.com/2m6ktfr3

Women-focused cardiovascular rehabilitation: An International Council of Cardiovascular Prevention and Rehabilitation clinical practice guideline

The first practice guideline from the International Council of Cardiovascular Prevention and Rehabilitation that focuses on women provides strategies to increase referrals and lift participation in cardiac rehabilitation among women with cardiovascular disease. The recommendations were based on a meta-analysis and were circulated to a Delphi panel of authors of review articles and programs that deliver women-focused cardiac rehabilitation as part of the selection process. Overall, the certainty of evidence for the final recommendations was low to moderate, and the evidence was mostly strong. Referral, choice of setting and delivery mode, preferred form of exercise, psychosocial assessment, and education are among the factors addressed by the guideline.

https://tinyurl.com/3k95dtyx

Pulmonary embolism

Timely diagnosis and expert management of pulmonary embolism are extremely important in the outpatient setting. This clinical practice article from the *NEJM* describes the challenges in the diagnosis and management of pulmonary embolism. The authors review the decision to test patients in the outpatient setting and recommend treatments for high-risk, intermediate-risk, and low-risk categories of pulmonary embolism. The authors also point out that patients should be monitored to evaluate the development of post–pulmonary embolism syndrome or chronic thromboembolic pulmonary hypertension.

N Engl J Med. 2022;387(1):45-57

Associations of thiazide use with skin cancers

Thiazides as a group have been previously associated with a variety of skin cancers, mainly, but not exclusively, keratinocyte carcinomas, in non-Asian countries. This systematic review and meta-analysis assessed the relationship between thiazide use and skin cancer risk based on 25 case-control or cohort studies of hydrochlorothiazide, bendroflumethiazide, and indapamide use that included nearly 18 million participants. Hydrochlorothiazide use was associated with an increased risk of melanoma (OR 1.11), non-melanoma skin cancer (NMSC; OR 1.16), and squamous cell carcinoma (OR 1.32), which was associated with high cumulative hydrochlorothiazide doses. Hydrochlorothiazide was associated with melanoma subtypes including superficial spreading (OR 1.18), nodular (OR 1.23), and lentigo maligna (OR 1.33) melanoma. Associations of hydrochlorothiazide with increased risk of NMSC and melanoma were only observed in non-Asian countries. There was no meaningful increased skin cancer risk associated with bendroflumethiazide or indapamide. Healthcare professionals and patients should be informed of the different risk profiles of skin cancers associated with different thiazides, cumulative doses, and regions.

https://tinyurl.com/4mmxyxcc

Vitamin and mineral supplements for the primary prevention of CVD and cancer

This systematic review for the US Preventive Services Task Force examined the benefits and harms of vitamin and mineral supplementation for prevention of cardiovascular disease and cancer in healthy adults based on 84 studies (n=739,803). Pooled analyses indicated that multivitamin use was associated with a lower incidence of any cancer and lung cancer. Beta carotene (with or without vitamin A) was associated with an increased risk of lung cancer and cardiovascular mortality in persons at high risk of lung cancer**.** Vitamins D and E were not associated with reductions in all-cause mortality, cardiovascular disease, or cancer. Evidence for other supplements was equivocal, minimal, or absent. Limited evidence suggested some supplements had a higher risk of serious harms (vitamin A with hip fracture, vitamin E with haemorrhagic stroke, and vitamin C and calcium with kidney stones).

https://tinyurl.com/msyjtmb2

COVID-19 Resources for Cardiologists

CSANZ https://tinyurl.com/y3xp272
ACC https://tinyurl.com/y68aud3a
ESC https://tinyurl.com/wn3fsts

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/3mwt5ttr
Cardiac Skills Australia https://tinyurl.com/zkzlelb
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/y3zkjp3o

Research Review Publications

Acute Coronary Syndrome Research Review
with Professor John French
http://tinyurl.com/gos7bqt

Atrial Fibrillation Research Review
with Dr Andre Catanchin
http://tinyurl.com/gpvl4dv

Cardiology Research Review
with Associate Professor John Amerena
http://tinyurl.com/gpxu6bl

Heart Failure Research Review
with Professor John Atherton, Professor Andrew Coats and Dr Mark Nolan
http://tinyurl.com/hxxrsv6

Interventional Cardiology Research Review
with Conjoint Professor Craig Juergens
http://tinyurl.com/h3h3wcp

Study Review – Rivaroxaban vs enoxaparin/vitamin K antagonist in VTE
https://tinyurl.com/4y6ahbcw

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 – http://www.researchreview.com.au/cpd?site=au

Practice Reviews cover news and issues relevant to 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.

RESEARCH REVIEW™ Australia's Leader in Specialist Publications

