2022 RACGP curriculum and syllabus for Australian general practice

Cardiovascular health

Rationale

Instructions

This section provides a summary of the area of practice for this unit and highlights the importance of this topic to general practice and the role of the GP.

Cardiovascular disease (CVD), including acute and chronic heart disease, stroke and peripheral vascular disease, is a complex and multifactorial issue that affects 16.6% of the Australian population. L2 It is the leading cause of death in Australia and accounts for 26% of all deaths. CVD also costs the Australian economy over \$5 billion each year, more than any other disease.

CVD mortality rates for Aboriginal and Torres Strait Islander adults (older than 25 years) are double that of non-Indigenous Australians, and seven times higher in those aged 40–54 years. Early intervention in the form of screening and risk factor modification is therefore vital. Screening for CVD in Aboriginal and Torres Strait Islander peoples is recommended from 18 years of age, and screening for CVD risk factors is recommended to start as early as 12 years of age. 5

General practitioners (GPs) are well placed to advise patients on how to modify their risk factor profiles through the promotion of healthy lifestyle choices. Risk factors include smoking tobacco, high body mass index (BMI), physical inactivity, elevated cholesterol, elevated blood pressure, excessive alcohol intake, and low fruit and vegetable consumption. These are considered the most effective areas to focus on for CVD prevention. 5

Atrial fibrillation is another common cardiac condition that significantly increases the risk of developing heart failure or stroke, making diagnosis and timely management vital. These patients are often managed entirely by GPs, with an emphasis on managing symptoms, preventing disease progression and avoiding hospitalisations.

Some cardiovascular conditions also affect children and can have long-term negative health outcomes. These include congenital heart defects and infectious diseases, such as rheumatic fever. The rates of acute rheumatic fever are higher in Aboriginal and Torres Strait Islander children, especially in rural and remote areas. If left undiagnosed and untreated, rheumatic fever can lead to rheumatic heart disease. It is the

GP's role to identify those at risk and provide appropriate treatment in the context of their community. Other types of sclerotic valvular pathologies are often picked up by GPs by undertaking opportunistic cardiovascular examinations when patients present for other reasons. GPs are also responsible for identifying and appropriately managing these to prevent later morbidity and mortality.

Deaths from heart disease are more than 50% higher for Australians in rural and remote areas of Australia compared with metropolitan areas. Research shows that this is due to multiple issues related to access, including the ability to pay, transport and geographical distances, delays in patients seeking care, access to diagnostic testing and timely treatment in an appropriate facility. Workforce shortages or lack of access to relevant non-GP specialists, cultural differences and complexities that arise from comorbidities and geographical isolation also amplify the challenges. GPs therefore play a key role in advocating for equitable access to cardiovascular and other general health services for patients in rural and remote areas. GPs working in rural and remote regions should also be supported to provide comprehensive cardiovascular healthcare with the resources they have available locally.

References

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- 3. Australian Bureau of Statistics. Causes of Death 2019. Canberra: ABS, 2020.
- 4. Australian Institute of Health and Welfare. Disease expenditure in Australia. Canberra: AIHW, 2019.
- 5. National Aboriginal Community Controlled Health Organisation and The Royal Australian College of General Practitioners. National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people. 3rd edn. East Melbourne, Vic: RACGP, 2018.
- 6. Ball J, Carrington MJ, McMurray JJV, Stewart S. Atrial fibrillation: Profile and burden of an evolving epidemic in the 21st century. Int J Cardiol 2013;167(5):1807–24.
- 7. Ralph AP, Noonan S, Wade V, Currie B. The 2020 Australian guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease. Med J Aust 2021;214(5):220–27. doi: 10.5694/mja2.50851.
- 8. National Heart Foundation of Australia. The great heart health divide: Killer gap exposed in new data. Melbourne: Heart Foundation, 2020
 (http://www.heartfoundation.org.au/media-releases/the-great-heart-health-divide-killer-gap-exposed-i) [Accessed 5 October 2021]
- 9. Thompson SC, Nedkoff L, Katzenellenbogen J et al. Challenges in managing acute cardiovascular disease and follow up care in rural areas: A narrative review. Int J Environ Res Public Health 2019;16(24):5126. doi: 10.3390/ijerph16245126.

Competencies and learning outcomes

Instructions

This section lists the knowledge, skills and attitudes that are expected of a GP for this contextual unit. These are expressed as measurable learning outcomes, listed in the left column. These learning outcomes align to the core competency outcomes of the seven core units, which are listed in the column on the right.

Communication and the patient-doctor relationship		
Learning outcomes	Related core competency outcomes	
The GP is able to:		
 discuss the impact of cardiovascular disease in a manner that is respectful and responsive to the sociocultural context of the patient 	1.1.1, 1.1.5, 1.1.6, 1.3.1, 1.3.2, AH1.3.1	
 consider the patient's level of health literacy when discussing treatment options and health behaviours that impact on cardiovascular health 	1.2.1, 1.2.2, 1.4.3, 1.4.4	

Applied knowledge and skills	
Learning outcomes	Related core competency outcomes
The GP is able to:	
 undertake appropriate assessment and management of patients with cardiovascular presentations, including a consideration of red flags 	2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.6, 2.1.7, 2.1.8, 2.1.10
monitor and manage chronic, progressive cardiovascular disease using evidence-based pharmacological treatment and lifestyle modifications	2.1.9, AH2.1.2, 2.3.1
identify and manage acute deterioration of cardiovascular conditions	2.1.3, 2.3.2, AH2.3.1, RH2.3.1

Applied knowledge and skills	
provide emergency care when required in cardiovascular emergencies	2.1.3, 2.1.9, 2.3.3
appropriately involve other non-GP specialists and health professionals in a patient's care when required	2.3.1, 2.3.2, 2.3.4, AH2.3.1, RH2.3.1

Population health and the context of general practice	
Learning outcomes	Related core competency outcomes
The GP is able to:	
 use a planned and opportunistic approach to provide cardiovascular health screening, preventive care and health- promotion activities in a culturally appropriate way 	3.1.1, 3.1.4, 3.2.2
 demonstrate knowledge of community needs and available resources for treating cardiovascular disease, and how to access these 	3.1.2, 3.2.2

Professional and ethical role	
Learning outcomes	Related core competency outcomes
The GP is able to:	
 reflect on skills for managing cardiovascular emergency situations and undertake training when required 	4.2.1, 4.2.2, RH4.2.2, RH4.2.3

Organisational and legal dimensions	
Learning outcomes	Related core competency outcomes
The GP is able to:	
use recall systems to optimise cardiovascular health outcomes for patients	5.2.1, 5.2.3, AH5.1.2
appropriately refer patients to allied health professionals for help with modifying their cardiovascular risk profile, both privately and via Medicare, when appropriate	5.2.3, AH5.1.3, AH5.2.1

Words of wisdom

Instructions

This section includes tips related to this unit from experienced GPs. This list is in no way exhaustive but gives you tips to consider applying to your practice.

Extension exercise: Speak to your study group or colleagues to see if they have further tips to add to the list.

- 1. Have a low threshold for suspecting silent ischaemia in those with risk factors or those who present with dyspnoea only. This is an under-recognised condition with poorer outcomes due to a delay in diagnosis.
- 2. Do not underestimate the power of your therapeutic relationship. Repeated brief motivational interviewing can help patients make significant lifestyle changes over time.
- 3. Don't forget to screen for heart failure in patients presenting with shortness of breath.
- **4.** In new-onset chest or abdominal pain, remember to consider acute coronary syndrome (ACS) and dissecting aneurysms as differentials.
- 5. Always ask about claudication in a patient presenting with limb pain.
- 6. It doesn't take long to lay hands on a patient. Much can be gleaned from the simple opportunistic assessment of vital signs, heart and lung sounds. This applies to children just as much as adults.

Case consultation example

Instructions

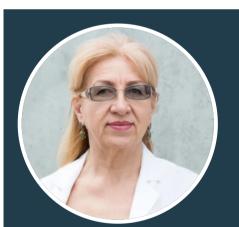
- 1. Read this example of a common case consultation for this unit in general practice.
- 2. Thinking about the case example, reflect on and answer the questions in the table below.

You can do this either on your own or with a study partner or supervisor.

The questions in the table below are ordered according to the <u>RACGP clinical exam assessment areas</u> (https://www.racgp.org.au/getmedia/f93428f5-c902-44f2-b98a-e56d9680e8ab/Clinical-Competency-Rubric.pdf.aspx) and domains, to prompt you to think about different aspects of the case example.

Note that these are examples only of questions that may be asked in your assessments.

Extension exercise: Create your own questions or develop a new case to further your learning.



Lila, a 55-year-old woman, presents with fluctuating epigastric pain for a few days. She thinks that her symptoms might have improved slightly after taking an antacid. She has a past medical history of type 2 diabetes and hypertension. On examination, the patient is pale. Her vital signs are all within normal limits. BMI is 35. Heart sounds are dual and regular, and chest sounds clear. Abdomen is soft, with mild discomfort in the epigastrium.

Questions for you to consider	Domains

Questions for you to consider		Domains
What strategies might you use to get a clear history?	1. Communication and consultation skills	1,2,5
How might your history-taking approach be different if Lila lived in a remote Aboriginal or Torres Strait Islander community? Who else might be able to provide further history?		
What if Lila were from a non-English speaking background?		
How would you find out Lila's ideas, concerns and expectations?		
What if she became very anxious when you indicated her condition was serious?		
What other past medical or family history may be important?	2. Clinical information gathering and interpretation	2
Are there investigation results in Lila's file that may be of interest?		
What investigations need to be ordered, and in what timeframes?	3. Making a diagnosis, decision making and reasoning	2
Would your approach be different if Lila were a healthy 25 year old with associated shortness of breath?		
What if she were an elderly person living in a high- dependency nursing home unit?		
Would you consider doing an ECG given Lila's cardiac risk factors? If the ECG were normal, what would your next steps be? If the ECG showed ST elevation in leads V1 and V2 with concomitant depression elsewhere, how would your management change?	4. Clinical management and therapeutic reasoning	2
What resources could you call on for help if you diagnosed an ST elevation myocardial infarction (STEMI) and were practising in a major city?		
How would your approach differ if you were in a rural practice three hours from the nearest hospital?		
What other health professionals would you consider involving in Lila's long-term care?		

		<u> </u>
Questions for you to consider		Domains
How could you use this situation as a prompt to educate Lila, her family and her community about the different presentations of acute coronary syndrome?	5. Preventive and population health	1,2,3
How would you approach this in a remote Aboriginal or Torres Strait Islander community? Who would you involve?		
What information resources are there for non-English speaking communities? Would your practice benefit from multilingual health-promotion pamphlets in your waiting room?		
How would you approach this situation if an ECG showed changes consistent with acute coronary syndrome and the patient refused to go to hospital? What supports would you be able to call on?	6. Professionalism	4
How would you record this consultation if Lila were a new patient to the clinic, was acutely unwell and had not brought any identification documents?	7. General practice systems and regulatory requirement	5
How would you ensure Lila is not lost to follow-up?		
Are you able to do an ECG if there was no nurse available?	8. Procedural skills	2
Are your IV cannulation skills up to date?		
Does your clinic have a process for labelling drawn-up medications to minimise medication errors in a stressful situation? Is there a protocol for who would be the scribe in an emergency?		
What would your safety-netting approach be in such a situation?	9. Managing uncertainty	2
How would you approach the initial consultation if it was made over telehealth?		
Do you feel confident in identifying and managing a deteriorating patient or a cardiac arrest in the clinic's treatment room? If not, what extra training could you undertake?	10. Identifying and managing the significantly ill patient	2

Learning strategies

Instructions

This section has some suggestions for how you can learn this unit. These learning suggestions will help you apply your knowledge to your clinical practice and build your skills and confidence in all of the broader competencies required of a GP.

There are suggestions for activities to do:

- on your own
- with a supervisor or other colleague
- in a small group
- with a non-medical person, such as a friend or family member.

Within each learning strategy is a hint about how to self-evaluate your learning in this core unit.



On your own

Review the RACGP's <u>Red book (https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/guidelines-for-preventive-activities-in-general-pr/preamble/introduction)</u> (guidelines for preventive activities in general practice) and the RACGP's <u>National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people (https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/national-guide).</u>

- Are you familiar with the absolute cardiovascular risk calculator function in your practice software? Is it being documented and used to guide your discussions with patients?
- Do you find a colour-coded representation (eg the calculator available on the Heart Foundation website) useful to help a patient's understanding, or not? Are you using any other risk factor calculators?

Do a random case review of 5-10 patients you have recently seen. Is their cardiovascular screening consistent with what is recommended?

- What preventive activities or lifestyle changes were covered, and which ones were missed?
- Have you considered checking for related conditions in patients with risk factors for heart disease; for example, peripheral vascular disease and diabetes?

Find brief (1–2 pages) resources to give to patients to support your commonly given advice, such as lowering lipids and how to form healthy habits. This will help to reinforce your own learning and make it easier to find these documents when you need them.

• Look at the key messages through the patient's eyes. Is the language appropriate? Are the messages clear? What information would you add or remove if you were writing something similar?

Practise interpreting an ECG using online resources or books of ECG tracings. Write down your ECG interpretation before checking the answers.

• If there are significant differences between your answers and those given, discuss with a peer or supervisor.



With a supervisor

Review one of your cases of a presentation of cardiac failure with your supervisor.

- Was the management gold-standard? Was the documentation adequate?
- How would your supervisor's approach differ from yours? Is there anything you might do differently next time?

• Has an echocardiogram been done to classify the type of heart failure? Have medications that have a mortality benefit been introduced and up-titrated to maximum tolerated doses?

With your supervisor, discuss how you would approach a patient presenting with palpitations. Create and contrast differential diagnosis lists together, and then discuss management of these potential diagnoses.

- What conditions are important not to miss, and how would you rule them out?
- What are common pitfalls to avoid?

Discuss the local community's cardiovascular health needs. Consider your location and access to services – the scope of general practice varies significantly throughout Australia.

- Is there a way to involve the clinic in community preventive healthcare strategies?
- Could you involve the school or town elders in health-promotion activities? How could you deliver health promotion messages in a way that would be well received by the local community?

Discuss potential causes of pericarditis or myocarditis and your diagnostic and management approaches.

- What are the key features on history?
- What further investigations would you request on the patient's initial presentation? What input from non-GP specialists would you require?
- What if it was a paediatric presentation?



In a small group

Role-play using motivational interviewing to encourage a patient to change their lifestyle to improve their cardiovascular health, such as stopping smoking and increasing physical activity.

- Give honest feedback to each other did the 'patient' feel supported? Judged? Motivated? Anything else?
- Reflect on this feedback and repeat the exercise in a few weeks.
- How can you best empower your patients?

Run a teaching session for your peers (eg management of atrial fibrillation). Ask the learners to work through some cases at the end of the teaching session to evaluate whether the content has been understood clearly. Discuss different scenarios, such as 'what if this was an elderly patient with a very high falls risk?'.

- How did the learners go? Were they able to apply what they learnt from you?
- What were the key points that you thought were important? Why? Is there anything you could do differently next time?

Have each person in the group present two cases related to cardiac conditions: one that went well, and one that was challenging.

• Discuss the elements of the successful consultations – what will you try to replicate and practise? For the difficult consultations, troubleshoot how these could be done differently.

Practise explaining the evidence base for prescribing pharmacological treatment for cardiac conditions; for example, atrial fibrillation, peripheral vascular disease or heart failure with reduced ejection fraction. Explain as if to a colleague, and then to a patient.

• Explain the same key information using technical jargon first, and then describe it in layperson terms for the 'patient'.



Do a role play where you explain to a patient why you are prescribing a medication, particularly for an asymptomatic condition, such as hypertension or hyperlipidaemia. Use a cardiovascular risk calculator.

- Ask your friend or family member for feedback did they feel you included them in the consultation and decision-making? Did they understand your discussion of risk and why you are recommending this treatment?
- Are there any resources or aids that could help you explain this?

Ask what your friend or family member knows about modifiable risk factors for heart disease. Where did that knowledge come from? Are there any barriers that prevent them from making positive lifestyle changes? Have they felt supported to make healthy lifestyle changes? What has been helpful, and what barriers have there been?

• Reflect on their answers – what elements could you incorporate into your own practice?

Guiding topics and content areas

Instructions

These are examples of topic areas for this unit that can be used to help guide your study.

Note that this is <u>not a complete or exhaustive list</u>, but rather a starting point for your learning.

- Identify and appropriately manage cardiac arrhythmias based on history, examination and ECG interpretation:
 - atrial fibrillation
 - o atrial flutter
 - o supraventricular tachycardia
 - ventricular fibrillation
 - atrial and ventricular ectopics
 - heart blocks/conduction disease.
- Identify and appropriately manage patients with valvular heart disease, or risk factors for developing this, such as:
 - mitral stenosis
 - mitral regurgitation
 - o aortic stenosis including bicuspid aortic valves
 - rheumatic fever and rheumatic heart disease.
- Provide holistic care for the prevention and treatment of ischaemic heart disease.
- Be aware of and use evidence-based risk estimation tools, such as (but not limited to):
 - Absolute cardiovascular risk calculator
 - o Chadsvasc2
 - HAS-BLED.
- Diagnose and appropriately manage chest pain:
 - acute coronary syndrome
 - pericarditis
 - myocarditis
 - o endocarditis.
- Develop a diagnostic approach to shortness of breath that includes cardiac causes, such as:
 - heart failure
 - cardiomyopathies
 - arrhythmias.
- Diagnose and manage vascular pathologies, including:
 - o aneurysms:
 - thoracic
 - abdominal
 - intracranial
 - peripheral

- peripheral vascular disease:
 - arterial insufficiency
 - varicose veins
 - chronic skin ulcers (including venous, arterial, malignant and pressure)
 - phlebitis
 - thrombophlebitis
 - vasculitis.
- Identify and manage hypertension and be able to differentiate between primary and secondary hypertension, and manage appropriately.
- Identify and manage hypotension.
- Appropriately screen for lipid disorders in high-risk patient groups, including familial hypercholesterolaemia.
- Be aware of the presentation and management (and what non-GP specialist input is required in addition to GP care) of paediatric cardiac issues, such as:
 - o minor congenital cardiac disease, such as atrial septal defects, ventricular septal defects and patent ductus arteriosus
 - o major congenital cardiac disease, such as tetralogy of Fallot, transposition of the great arteries and coarctations
 - rheumatic fever/rheumatic heart disease
 - Kawasaki disease
 - o heart failure.
- Maintain skills in procedures:
 - ECG recording and interpreting
 - o insertion of IV lines
 - o basic X-ray interpretation
 - o venepuncture.

Learning resources

Instructions

The following list of resources is provided as a starting point to help guide your learning only and is not an exhaustive list of all resources. It is your responsibility as an independent learner to identify further resources suited to your learning needs, and to ensure that you refer to the most up-to-date guidelines on a particular topic area, noting that any assessments will utilise current guidelines.

Journal articles

Cardiovascular disease risk factors in Australia.

• <u>Cardiovascular disease risk factors (http://www1.racgp.org.au/ajgp/2020/august)</u>. Aust J Gen Pract 2020;49(8).

Assessment and management of chest pain in primary care.

• <u>Cardiovascular disease. (http://www1.racgp.org.au/ajgp/2018/may)</u> Aust J Gen Pract 2018;47(5).

Article about chest pain.

• <u>Chest pain (https://www.racgp.org.au/afp/2017/november)</u>. Aust Fam Physician 2017;46(11).

A summary of the different types of acute coronary syndromes and appropriate management.

• Eng-Frost J, Chew D. <u>Diagnosis and management of acute coronary syndromes.</u> (http://www.nps.org.au/australian-prescriber/articles/diagnosis-and-management-of-acute-coronary-syndromes) Aust Prescr 2021;44:180–84. Textbooks A comprehensive text on addiction medicine and a good read.

Textbooks

A presentation-based approach and differential diagnoses.

 Murtagh J, Rosenblatt J, Coleman J, Murtagh C, editors. <u>John Murtagh's General Practice, 7th edn</u> (https://murtagh.mhmedical.com/book.aspx?bookid=2471). Sydney: McGraw Hill, 2018.

Online resources

Useful guidelines for preventive activities in general practice.

• The Royal Australian College of General Practitioners. Red book.

(https://www.racgp.org.au/download/Documents/Guidelines/Redbook9/17048-Red-Book-9th-Edition.pdf) Guidelines for preventive activities in general practice (https://www.racgp.org.au/download/Documents/Guidelines/Redbook9/17048-Red-Book-9th-Edition.pdf). 9th edn. East Melbourne, Vic: RACGP, 2016.

A thorough overview of hypertension, including pharmacological and non-pharmacological management options.

National Heart Foundation of Australia. <u>Guideline for the diagnosis and management of hypertension in adults - 2016</u>
 (http://www.heartfoundation.org.au/conditions/hypertension). Melbourne: National Heart Foundation of Australia, 2016.

Useful information regarding Aboriginal and Torres Strait Islander peoples.

National Aboriginal Community Controlled Health Organisation and The Royal Australian College of General Practitioners.
 National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people
 (https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/national-guide).
 3rd edn. East Melbourne, Vic: RACGP, 2018.

Up-to-date resources on medication management useful for multiple topics in general practice.

• <u>Therapeutic Guidelines (http://www.tg.org.au)</u> [digital]. Melbourne: Therapeutic Guidelines Limited; 2021 Mar.

Extensive ECG library of resources to help you learn and practise ECG interpretation.

• Life in the Fast Lane (https://litfl.com).

Helpful guidelines and position statements on a variety of cardiac conditions.

• Cardiac Society of Australia and New Zealand. <u>Position statements and practice guidelines (http://www.csanz.edu.au/for-professionals/position-statements-and-practice-guidelines)</u>. OtherThe Victorian Drug and Alcohol Clinical Advisory Service (DACAS) is a telephone consultancy service that is free for health and welfare professionals. GPs can call at any time of day for specialist advice on patient management.

Learning activities

Approaches to identifying and managing ACS, deep vein thrombosis, rheumatic heart disease and some of its potential complications, and takotsubo cardiomyopathy.

- The Royal Australian College of General Practitioners, *gplearning* (https://www.racgp.org.au/education/professional-development/online-learning/gplearning) activities:
 - o check, unit 562, July 2019: Cardiovascular
 - check, unit 584, July 2021: Cardiovascular disease

Activities including optimising statin therapy and blood pressure management.

NPS MedicineWise (http://www.nps.org.au).

Other

Useful resources; including tools, risk calculators and clinical information.

The Heart Foundation (http://www.heartfoundation.org.au).

This contextual unit relates to the other unit/s of:

- Child and youth health (https://www.racgp.org.au/curriculum-and-syllabus/units/child-and-youth-health)
- <u>Emergency medicine (https://www.racgp.org.au/curriculum-and-syllabus/units/emergency-medicine)</u>
- Endocrine and metabolic health (https://www.racgp.org.au/curriculum-and-syllabus/units/metabolic-and-endocrine-health)
- Infectious diseases (https://www.racgp.org.au/curriculum-and-syllabus/units/infectious-diseases)
- Kidney and urinary health (https://www.racgp.org.au/curriculum-and-syllabus/units/kidney-and-urinary-health)
- <u>Migrant, refugee and asylum seeker health (https://www.racgp.org.au/curriculum-and-syllabus/units/migrant-refugee-and-asylum-seeker-health)</u>

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