This statement is part of the curriculum produced by the Royal College of General Practitioners (RCGP) which defines the learning outcomes for the discipline of general practice and describes the skills you require to practise medicine as a general practitioner in the National Health Service (NHS) of the United Kingdom. Although primarily aimed at the start of independent work as a general practitioner, it must also prepare the doctor beyond the training period and provide support for a professional life of development and change.
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**KEY MESSAGES**

- Cardiovascular problems are an important cause of morbidity and mortality
- Managing the risk factors for cardiovascular problems is an essential part of health promotion activity in primary care
- As a general practitioner you should be competent in the management of cardiovascular emergencies in primary care
- Accurate diagnosis of symptoms that may potentially be caused by cardiovascular causes is a key competence for general practice
CASE ILLUSTRATION

Example adapted from C. Heneghan in *Cardiovascular Disease in Primary Care - a guide for GPs*, RCGP Publications, 2010.

Mr Black is a 58-year-old man who presents to your clinic with a history of central chest pain radiating to the left arm. This occurs on exertion and is relieved by rest. It started about one month ago and has not got any worse.

He has no history of hypertension, diabetes or hyperlipidaemia that you are aware of, but he rarely visits the practice. He smokes. There is no family history of ischaemic heart disease but his mother developed diabetes from the age of 65.

On examination, he is comfortable. His blood pressure is 155/95 with a pulse rate of 85 b.p.m. regular. His BMI is 32 kg/m².

To help you understand how the GP curriculum can be applied to this case, ask yourself the following questions:

<table>
<thead>
<tr>
<th>Primary care management</th>
<th>What additional information do I need? How will I go about making a diagnosis?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-centred care</td>
<td>What else would I discuss with the patient in this consultation?</td>
</tr>
<tr>
<td>Specific problem-solving skills</td>
<td>Would an exercise ECG be helpful? What support could I give him for smoking cessation?</td>
</tr>
<tr>
<td>A comprehensive approach</td>
<td>What additional benefit would a referral bring?</td>
</tr>
<tr>
<td>Community orientation</td>
<td>What community-based investigations would I perform?</td>
</tr>
<tr>
<td>A holistic approach</td>
<td>What would I tell his partner?</td>
</tr>
<tr>
<td>Contextual features</td>
<td>What are the national guidelines for diagnosis and longer-term treatment in this case?</td>
</tr>
<tr>
<td>Attitudinal features</td>
<td>Should overweight smokers be offered open access to treatment if they do not lose weight or cease smoking?</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Scientific features</td>
<td>Should I calculate cardiovascular risk in such an individual?</td>
</tr>
</tbody>
</table>
LEARNING OUTCOMES

The following learning outcomes or objectives relate specifically to the management of cardiovascular problems. Such problems include coronary heart disease (angina, acute coronary syndromes, cardiac arrest), heart failure, arrhythmias, other heart disease (valve disease, cardiomyopathy, congenital), peripheral vascular disease (arterial and venous), cerebrovascular disease (stroke and transient ischaemic attack (TIA)) and thromboembolic disease (PE and DVT). These learning outcomes are in addition to those detailed in the core statement, Being a General Practitioner. In order to demonstrate the core competences in the area of cardiovascular health you will require knowledge, skills and attitudes in the following areas:

The RCGP areas of competence

1 Primary care management

This area of competence is about how you manage your contact with patients, dealing competently with any and all problems that are presented to you. (This area of competence is not limited to dealing with the management of the practice.)

This means that as a GP you should:

1.1 Manage primary contact with patients who have a cardiovascular problem
1.2 Make an initial diagnosis to elicit the appropriate signs and symptoms, and subsequently investigate and/or refer patients presenting with symptoms (below) that might be cardiac in origin, noting that in each case there will be a non-cardiac differential diagnosis:
   1.2.1 chest pain
   1.2.2 breathlessness
   1.2.3 ankle swelling
   1.2.4 symptoms or signs thought to be caused by peripheral vascular disease (arterial and venous)
   1.2.5 palpitations and silent arrhythmias
   1.2.6 signs and symptoms of cerebrovascular disease
   1.2.7 dizziness and collapse
1.3 Be able to manage cardiovascular conditions, including:
   1.3.1 coronary heart disease
   1.3.2 heart failure
   1.3.3 arrhythmias (atrial fibrillation is by far the commonest)
   1.3.4 other heart disease (valve disease, cardiomyopathy, congenital problems)
1.3.5 peripheral vascular disease (arterial and venous)
1.3.6 cerebrovascular disease
1.3.7 thromboembolic disease (PE and DVT)
1.4 Co-ordinate and commission care with other primary care health professionals, cardiologists and other appropriate specialists, leading to effective and appropriate acute and chronic disease management – including prevention, rehabilitation and palliative care for those with end-stage cardiac failure
1.5 Make timely appropriate referrals on behalf of patients to specialist services, especially to rapid-access chest pain, stroke/TIA and heart failure clinics
1.6 Promote cardiovascular well-being by applying health promotion and disease prevention strategies appropriately
1.7 Describe strategies for early detection of cardiovascular problems that may already be present but have not yet produced symptoms

2 Person-centred care

This area of competence is about understanding and relating to the context of your patients as individuals, and developing the ability to work in partnership with them.

This means that as a GP you should:

2.1 Identify your patient’s health beliefs regarding cardiovascular problems and either reinforce, modify or challenge these beliefs as appropriate
2.2 Recognise that non-concordance is common for many preventative cardiovascular medicines and respect your patient’s autonomy when negotiating management
2.3 Communicate the patient’s risk of cardiovascular problems clearly and effectively in a non-biased manner
2.4 Utilise disease registers and data-recording templates effectively for opportunistic and planned monitoring of cardiovascular problems to ensure continuity of care between different healthcare providers
2.5 Consider involving the patient in self-monitoring and self management (for instance of hypertension)

3 Specific problem-solving skills

This area of competence is about the context-specific aspects of general practice, dealing with early and undifferentiated illness and the skills you need to tolerate uncertainty, and marginalise danger, without medicalising normality.

This means that as a GP you should:

3.1 Intervene urgently when patients present with a cardiovascular emergency, e.g. myocardial infarction, stroke and critical ischaemia
3.2 Demonstrate an understanding of the importance of risk factors, including chronic kidney disease, in the diagnosis and management of cardiovascular problems
3.3 Demonstrate a reasoned approach to the diagnosis of cardiovascular symptoms (e.g. chest pain – see above) using history, examination, incremental investigations and referral. Investigations you will be expected to understand and utilise include:

3.3.1 blood pressure measurement  
3.3.2 12-lead electrocardiogram  
3.3.3 24-hour ambulatory blood pressure measurement and ECG monitoring  
3.3.4 venous dopplers and ankle brachial pressure index (ABPI) measurement  
3.3.5 echocardiogram  
3.3.6 secondary care investigations and treatment

4 A comprehensive approach

This area of competence is about how you as a general practitioner must be able to manage co-morbidity, co-ordinating care of acute illness, chronic illness, health promotion and disease prevention in the general practice setting.

This means that as a GP you should:

4.1 Prioritise interventions for multiple risk factors and symptoms of cardiovascular problems, according to their severity and prognostic risk
4.2 Advise your patients appropriately regarding lifestyle interventions, according to their cardiovascular risk and level of disability
4.3 Consider whether other co-morbidities are present and manage these appropriately

5 Community orientation

This area of competence is about the physical environment of your practice population, and the need to understand the interrelationship between health and social care, and the tensions that may exist between individual wants and needs and the needs of the wider community.

This means that as a GP you should:

5.1 Recognise social determinants of health and the importance of population interventions
5.2 Advise patients appropriately about driving, according to their cardiovascular risk and Driving and Vehicle Licensing Agency (DVLA) guidelines
6 A holistic approach

This area of competence is about your ability to understand and respect the values, culture, family structure and beliefs of your patients, and understand the ways in which these will affect the experience and management of illness and health.

This means that as a GP you should:

6.1 Appreciate the importance of the social and psychological impact of cardiovascular problems on the patient, their family, friends, dependants and employers
6.2 Recognise the impact cardiovascular problems have on disability and fitness to work
6.3 Recognise the cultural significance that people attach to the heart as a seat of emotions

The essential features of you as a doctor

The three essential features (EFs) below are concerned with the features of you as a doctor which may influence your ability to apply the core competences to real life in the work setting.

EF1 Contextual features

This essential feature is about understanding your own context as a doctor and how it may influence the quality of your care. Important factors are the environment in which you work, including your working conditions, community, culture, financial and regulatory frameworks.

Examples of this are:

EF1.1 Being able to describe current population trends in the prevalence of risk factors and cardiovascular disease in the community
EF1.2 Being able to describe the key government policy documents that influence healthcare provision for cardiovascular problems

EF2 Attitudinal features

This essential feature is about your professional capabilities, values, feelings and ethics and the impact these may have on your patient care.

Examples of this are:

EF2.1 Ensuring that personal opinions regarding risk factors for cardiovascular problems (e.g. smoking, obesity, exercise, alcohol, age, ethnicity) do not influence your management decisions
EF3 Scientific features

This essential feature is about the need to adopt a critical and evidence-based approach to your work, maintaining this through lifelong learning and a commitment to quality improvement.

Examples of this are:

EF3.1 Describing and being able to implement the key national guidelines that influence healthcare provision for cardiovascular problems

EF3.2 Being able to describe the key research findings that influence management of cardiovascular problems (e.g. Heart Protection study, Framingham study and Interheart; plus see the reading list below)
LEARNING STRATEGIES

Work-based learning – in primary care

- Primary care is a good place for you to learn how to manage cardiovascular problems because of the wealth of clinical material. Patients will present with various symptoms, at varying stages in the natural history of their illness. Critical, professional discourse with a trainer will aid specialty trainees in developing heuristics to help in problem-solving. Supervised practice will also give trainees confidence.
- In particular, the GP specialty trainee should be able to learn about risk factor management and gain experience in the management of cardiovascular problems as they present (acute and chronic), including emergencies. Primary care is also the best place to learn about chronic disease management (angina, post-myocardial infarction (MI), heart failure, stroke, peripheral vascular disease).

Work-based learning – in secondary care

- Some GP training programmes have placements of varying lengths with cardiologists. The acute setting is the place for you to learn about the immediate management of acute coronary syndrome (ACS), MI, stroke and aortic aneurysms. As a specialty trainee you will also learn about the invasive management of cardiovascular problems: angioplasty, coronary artery bypass grafts, transplantation, other forms of vascular surgery (carotid endarterectomy, vascular bypass). Outpatient or clinic settings are ideal places for seeing concentrated groups of patients with cardiovascular problems. They provide you with opportunities to learn about secondary care investigation of cardiovascular problems (exercise tests, radionucleotide scans, MRI/CT, carotid dopplers, angiography and echocardiography).
- Vocational training programmes should offer you the opportunity to attend cardiovascular clinics when working in other hospital posts and you should also consider attending specialist clinics during your general practice-based placements.

Non-work-based learning

- Many postgraduate deaneries provide courses on cardiovascular problems. Other providers include universities and the Royal College of General Practitioners. There is a growing body of e-learning to help you consolidate and build on the knowledge you have gained in the workplace.

Learning with other healthcare professionals

- Chronic disease management in primary care is a multidisciplinary activity. As a specialty trainee it is important for you to attend nurse-led cardiovascular disease annual review assessments in practice and gain an understanding of the follow-up of hypertensive patients in the practice’s clinics that are often led and delivered by a practice nurse. It is also important to understand the role of district nurses in the assessment and management of leg ulcers or ankle oedema by attending their clinics or home visits. You should also take the opportunity to observe cardiovascular rehabilitation programmes led by physiotherapists.
LEARNING RESOURCES

Examples of relevant texts and resources


Web resources

**British Cardiac Society**
www.bcs.com

**British Heart Foundation**
www.bhf.org.uk

**British Hypertension Society** (lists of validated BP monitors)
www.bhsoc.org

**Chronic Disease Management** *Long Term Conditions* Paper from RCGP
www.rcgp.org.uk/policy/rcgp-policy-areas/long-term-conditions.aspx
NHS Evidence Health Information Resources
Chest Pain: www.evidence.nhs.uk/topic/chest-pain
Stroke: www.evidence.nhs.uk/topic/stroke
Hypertension: www.evidence.nhs.uk/topic/hypertension
Chronic Kidney Disease: www.evidence.nhs.uk/topic/chronic-kidney-disease
[Note: NHS Evidence has additional sections on a wide variety of topics]

National Institute for Health and Care Excellence (NICE – for copies of guidelines including heart failure, hypertension, post MI, cardiovascular risk, chest pain.)
www.nice.org.uk

Personal experiences of illness and health (multimedia)
www.healthtalkonline.org

South Asian Health Foundation
www.sahf.org.uk

The Stroke Association
www.stroke.org.uk

Interesting papers

Acute coronary syndrome
- Hoenig MR, Aroney CN, Scott IA. Early invasive versus conservative strategies for unstable angina and non-ST elevation myocardial infarction in the stent era. Cochrane Database of Systematic Reviews 2010 Mar 17; 3: CD004815

Angina
Cardiac rehabilitation


CHD: economics of treatment


CHD: specialised topics


- Cambien F and Tiret L. Genetics of cardiovascular diseases: from single mutations to the whole genome *Circulation* 2007; 116(15): 1714–24

Heart disease statistics

- The best source of these can be downloaded as both PDF and Excel spreadsheets from the British Heart Foundation ‘Heart Stats’ website: [www.bhf.org.uk/heart-health/statistics.aspx](http://www.bhf.org.uk/heart-health/statistics.aspx)

Heart failure


- Paulus WJ. Novel strategies in diastolic heart failure *Heart* 2010 96(14): 1147–53

Patient’s perspective


Peripheral vascular disease


Risk factors for CHD


Self-management

Stroke

- Mant J, McManus RJ, Hare R. Applicability to primary care of national clinical guidelines on blood pressure-lowering for people with stroke: cross-sectional study *British Medical Journal* 2006; 332: 635–7

Venous thromboembolism

- Tovey C and Wyatt S. Diagnosis, investigation, and management of deep vein thrombosis *British Medical Journal* 2003; 326(7400): 1180–4
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