

# CLINICAL PRACTICE EVALUATION PROGRAMME (CPEP)

---

## EVIDENCE BASED REVIEW CRITERIA FOR THE PRIMARY CARE MANAGEMENT OF **CORONARY HEART DISEASE**

*Practical tools for quality improvement in primary care*

*January 2000*



Royal College of General Practitioners



University of Sheffield



The feasibility phase of CPEP is generously supported by an educational grant from Merck Sharp & Dohme and by the National Institute for Clinical Excellence

## Introduction

---

The RCGP Clinical Practice Evaluation Programme (CPEP) has developed a set of evidence based review criteria for the primary care management of patients with coronary heart disease (CHD). The criteria, on the centre pages of this booklet, address areas of care provided for patients with **stable angina, a history of myocardial infarction, and heart failure**.

CPEP evidence based review criteria are derived from recommendations and statements about particular aspects of care, drawn from the best available evidence based clinical guidelines, and presented in a form to support clinical record review.

Many practices have already undertaken review of care for patients with CHD. These new review criteria have been developed to support that process by drawing on the best available evidence based guidelines, thus reducing the need for audit teams to undertake this work themselves. They also take into account aspects of the National Service Framework (NSF) for CHD and are complementary to other national and local guideline and effectiveness information.

Review criteria, like any other quality improvement tool, should be used in the context of the individual clinical situation, in which clinical judgement and patient preference play an important role in determining treatment options. Although the review criteria remain current until December 2001, the use of criteria should also take into account any major new research findings published during this period.

## Using these review criteria

---

In developing the review criteria, a group of over 60 general practitioners prioritised the aspects of care from clinical guidelines according to their opinion of the relative importance of each to clinical practice. Practices or PCGs planning activities around the care of patients with CHD may like to begin by selecting those criteria considered to be of highest priority or, alternatively, select criteria for which information is already easily available.

The criteria may be useful for evaluating and improving quality of care in a number of contexts, including clinical governance. Practices, PCGs and local audit and clinical effectiveness groups might use the criteria

- to facilitate clinical audit (single, multi-practice or primary/secondary care interface)
- to undertake a baseline assessment of the quality of existing practice data for CHD
- as a basis for setting local standards of care for CHD (linking with Health Improvement Programmes)
- as prompts for practitioners during consultations
- to develop local indicators of quality
- as material for use in continuing professional development programmes.

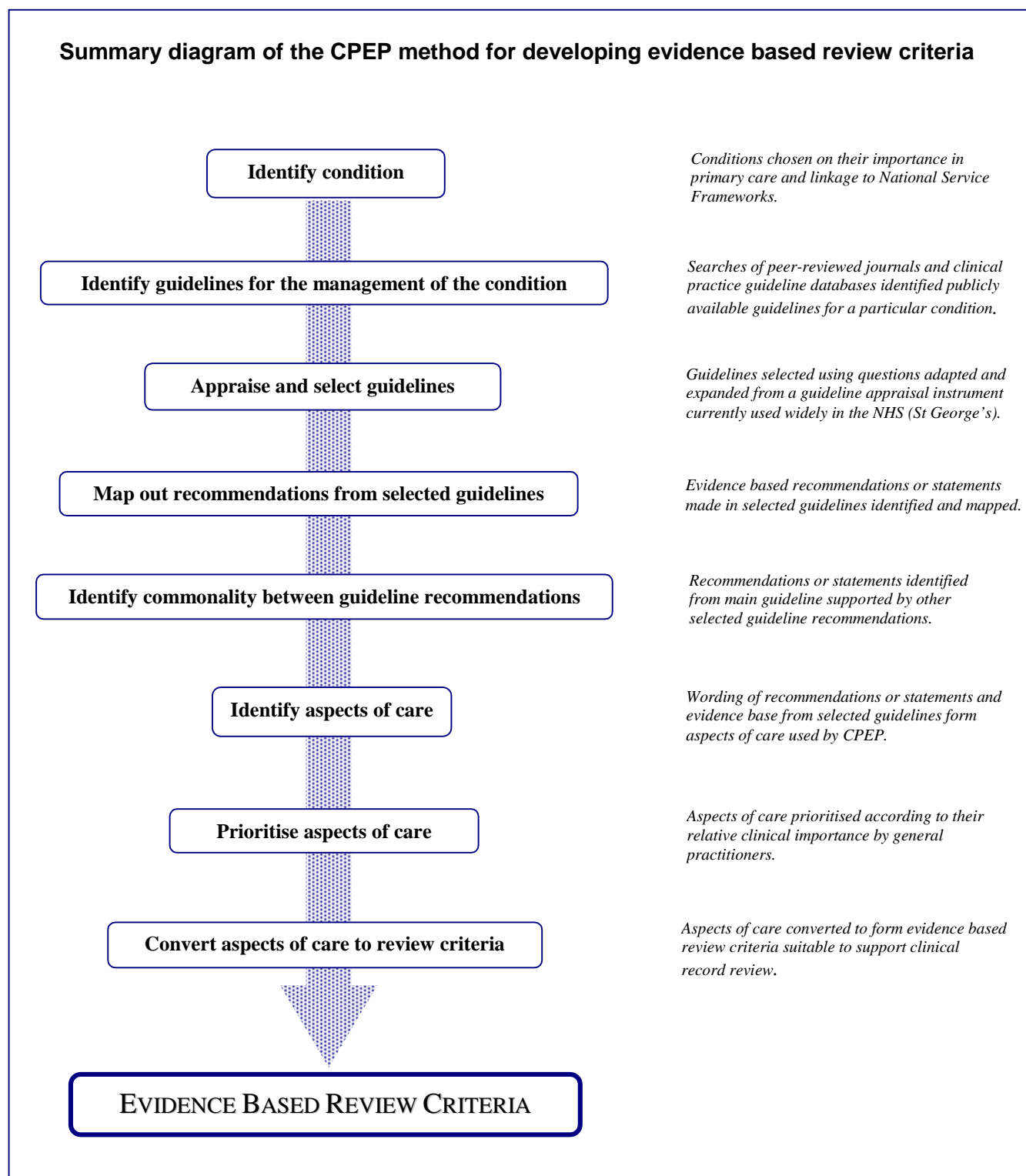
Some recommendations from the clinical guidelines that have been used within CPEP translate easily into practical review criteria, others less so. Therefore, to ensure that the review criteria are practical and lead to consistent data collection, some criteria will need to be further specified locally. For example, the criteria do not include timeframes as there is little consensus about this among the guidelines from which the criteria were developed. Local groups may also wish to decide on other issues relating to the review criteria.

CPEP has specifically not set standards around the review criteria as this process may be more useful if based on local benchmarking from initial audits possibly using regular review of achievable improvements in the local standard.

## Development of review criteria using CPEP methods

The criteria were derived from selected current evidence based clinical guidelines. In the great majority of instances, the direct meaning of the guideline recommendation has been used as the basis for each criterion.

A summary of the method used to develop these criteria is given below and more details about the method will become available on the CPEP website.



# EVIDENCE BASED REVIEW

---

## **Please note -**

- The criteria appear in **order of clinical importance** as prioritised by GPs. For ease of use, they have been grouped under the headings **clinical assessment, therapy, and advice**.
- The CPEP team accessed a small number of additional guidelines subsequent to the prioritisation process. The criteria derived from these guidelines have been denoted by \*.
- The table outlining the aspects of care for CHD on page 6 makes clear the **levels and source of supporting evidence** as described in the guidelines.
- More detailed information about the underlying evidence base and clinical priority for each criterion will become available on the CPEP website. ([www.shef.ac.uk/~scharr/public/cpep](http://www.shef.ac.uk/~scharr/public/cpep))
- These criteria will remain **current until December 2001**.

## **STABLE ANGINA**

### **Clinical Assessment**

1. The % of patients with stable angina who have had their blood pressure measured.
2. The % of patients with stable angina who have had their serum lipids measured.
3. The % of patients with stable angina who have had their BMI checked at diagnosis.
4. The % of patients with stable angina who have had an exercise test.
5. The % of patients with stable angina who have had their haemoglobin measured to identify those with underlying anaemia. \*
6. The % of patients with stable angina who have had their blood glucose measured to identify those with diabetes mellitus. \*
7. The % of patients with stable angina who have had a resting 12 lead ECG. \*

### **Therapy**

1. The % of patients with stable angina who have been treated with aspirin 75mg daily, unless contraindicated.
2. The % of patients with stable angina who have been treated with short acting nitrates as required in response to pain and before performing activities that are known to bring on pain, unless contraindicated.
3. The % of patients with stable angina who require regular symptomatic treatment who have been treated with a  $\beta$ -blocker, unless contraindicated.

### **Advice**

1. The % of patients with stable angina who smoke and have been advised to stop.
2. The % of patients with stable angina who have been recommended moderate exercise within their capabilities to improve general fitness and well-being.

# CRITERIA FOR CHD

## PATIENTS POST-MYOCARDIAL INFARCTION

### Clinical Assessment

1. The % of patients post-MI who have had their serum lipids measured.
2. The % of patients post-MI whose blood pressure is maintained below 140/85 mmHg, where practical.
3. The % of patients post-MI who have had their blood glucose measured.

### Therapy

1. The % of patients post-MI who have been treated with aspirin 75mg daily, unless contraindicated.
2. The % of patients post-MI who have been treated with a  $\beta$ -blocker, unless contraindicated.
3. The % of patients post-MI with symptomatic heart failure and evidence of impaired left ventricular function who have been treated with an ACE inhibitor, unless contraindicated.
4. For those whose total cholesterol remains  $\geq 5\text{mmol/l}$  and /or LDL-cholesterol  $\geq 3\text{mmol/l}$ , even after dietary advice for at least 6 weeks - the % of patients post-MI who have been considered for treatment with a statin, unless contraindicated. \*

### Advice

1. The % of patients post-MI who smoke and have been advised to stop.
2. The % of patients post-MI who have been recommended moderate exercise within their capabilities to improve general fitness and well-being.

## HEART FAILURE

### Clinical Assessment

1. The % of patients suspected of having heart failure who have had their left ventricular function evaluated.
2. The % of patients with heart failure who have systolic blood pressure below 100 mmHg who have been considered for referral for assessment and supervised initiation of ACE inhibitors.
3. The % of patients with suspected or clinically evident heart failure who have had a chest x-ray. \*

### Therapy

1. The % of patients with symptomatic heart failure and evidence of impaired left ventricular function who have been treated with an ACE inhibitor, unless contraindicated.
2. The % of patients with heart failure and signs of significant volume overload who have been started immediately on a diuretic, unless contraindicated.
3. For those with mild or moderate heart failure who remain symptomatic after optimal management with ACE inhibitors and diuretics - the % of patients who have also been treated with digoxin, unless contraindicated.

### Advice

1. The % of patients with heart failure who have been advised to restrict dietary sodium to as close to 2g per day as possible.
2. The % of patients with heart failure who have been advised to restrict their consumption of alcohol to one drink per day.

## Aspects of care for CHD

STABLE ANGINA		Evidence	Location
Clinical Assessment	1. All patients should have their <b>blood pressure</b> measured.	level I	NofE(a) p.19
	2. All patients with angina should have their <b>serum lipids</b> measured.	level I	NofE(a) p.18
	3. All patients should have their <b>body mass index</b> checked at diagnosis.	level III	NCAC p.12
	4. All patients with clinically certain angina should have an <b>exercise test</b> .	level II	NofE(a) p.14
	5. Patients being investigated for angina should have their <b>haemoglobin</b> measured to identify those with underlying anaemia.	none given	NofE(a) p.12
	6. Patients being investigated for angina should have their <b>blood glucose</b> measured (on one or more occasions as necessary) to identify those with diabetes mellitus.	none given	NofE(a) p.12
	7. All patients with angina should have a <b>resting 12 lead ECG</b> .	level II	NofE(a) p.12
Therapy	1. Patients who have stable angina should be treated with <b>aspirin 75mg daily</b> , unless contraindicated.	level I	NofE(a) p.27
	2. Patients should be treated with <b>short acting nitrates</b> as required in response to pain, and before performing activities that are known to bring on pain, unless contraindicated.	level I	NofE(a) p.28
	3. All patients who require regular symptomatic treatment should be treated with a <b>β-blocker</b> , unless contraindicated.	level I	NofE(a) p.28
Advice	1. Patients who <b>smoke</b> should be advised to stop.	level II	NofE(a) p.20
	2. <b>Moderate exercise</b> within a patient's capabilities should be recommended to improve general fitness and well-being.	no consistent evidence	NofE(a) p.23
POST-MYOCARDIAL INFARCTION		Evidence	Location
Clinical Assessment	1. All patients should have their <b>serum lipids</b> measured.	level I	NofE(a) p.18
	2. <b>Blood pressure</b> should be maintained below 140/85 mmHg where practical.	level IV	McReC p.6
	3. Patients should have their <b>blood glucose</b> measured (on one or more occasions as necessary) to identify those with diabetes mellitus.	none given	NofE(a) p.12
Therapy	1. Patients post-MI should be treated with <b>aspirin 75mg daily</b> , unless contraindicated.	level I	NofE(a) p.27
	2. All patients who should be treated with a <b>β-blocker</b> , unless contraindicated.	level I	NofE(a) p.28
	3. All patients with symptomatic heart failure and evidence of impaired left ventricular function should be treated with an <b>ACE inhibitor</b> , unless contraindicated.	level Ia	NofE(b) p.17
	4. A <b>statin</b> should be considered in post-MI patients whose total cholesterol remains ≥ 5mmol/l and/or LDL-cholesterol ≥ 3mmol/l even after following dietary advice for at least 6 weeks.	level I	McReC p.6
Advice	1. Patients who <b>smoke</b> should be advised to stop.	level II	NofE(a) p.20
	2. <b>Moderate exercise</b> within a patient's capabilities should be recommended to improve general fitness and well-being.	no consistent evidence	NofE(a) p.23
HEART FAILURE		Evidence	Location
Clinical Assessment	1. <b>Left ventricular function</b> should be evaluated in all patients with suspected heart failure.	level Ia	NofE(b) p.29
	2. Patients should be considered for referral for assessment and supervised initiation of ACE inhibitor treatment if <b>systolic blood pressure is below 100 mmHg</b> .	level IV based on AHCPR level I	NofE(b) p.32
	3. Practitioners should perform a <b>chest x-ray</b> for all patients with suspected or clinically evident heart failure.	level IV	AHCPR p.31
Therapy	1. All patients with symptomatic heart failure and evidence of impaired left ventricular function should be treated with an <b>ACE inhibitor</b> , unless contraindicated.	level Ia	NofE(b) p.17
	2. Patients with heart failure and signs of significant volume overload should be started immediately on a <b>diuretic</b> , unless contraindicated.	level IV	AHCPR p.49
	3. <b>Digoxin</b> should be added to the medical regimen of patients with mild or moderate heart failure who remain symptomatic after optimal management with ACE inhibitors and diuretics, unless contraindicated.	level IV	AHCPR p.58
Advice	1. <b>Dietary sodium</b> should be restricted to as close to 2g per day as possible.	level IV	AHCPR p.44
	2. <b>Alcohol</b> should be discouraged. Patients who drink should be advised to consume no more than one drink per day.	level IV	AHCPR p.44

## Strength of evidence

The aspects of care table opposite shows the level and source of evidence for each recommendation made in the selected guidelines. The grading system used to describe the evidence base varies between guidelines, but for this table the grading has been standardised. Occasionally it is not possible to determine the level of evidence from clinical guidelines or there is no consistent evidence available. This is also reflected in the table. In general, **level I** evidence usually denotes the **strongest** evidence base. The grading system that has been used is similar to that within the North of England stable angina guideline and is detailed below.

<b>level I</b>	Evidence from meta-analysis of randomised controlled trials or from at least one randomised controlled trial
<b>level II</b>	Evidence from at least one controlled study without randomisation or at least one other type of quasi-experimental study
<b>level III</b>	Evidence from non-experimental descriptive studies, such as comparative studies, correlation studies or case-control studies
<b>level IV</b>	Evidence from expert committee reports or opinions and/or clinical experience of respected authorities

Adapted from Eccles, M. et al. *North of England Evidence Based Guideline Development Project. Evidence based clinical practice guideline: the primary care management of stable angina.* Centre for Health Services Research, Newcastle upon Tyne. Report No. 98, 1999.

While practices or PCGs may wish to adapt some aspects of criterion detail or priority to suit individual patients or local circumstances, any adaptations should remain consistent with the evidence base and maintain the integrity of each review criterion.

Further details of the levels of evidence for each criterion will become available on the CPEP website.

## Guideline references

Guideline content, such as recommendations, may overlap with guidelines for a related condition. In CPEP, both the recommendations and the supporting evidence were considered, not just the stated guideline condition. Thus some aspects of care may be identified as coming from a condition-related rather than condition-specific guideline. For recommendations common across different aspects of CHD, the guideline which provided the best supporting evidence was used and is indicated in the table.

<b>Stable Angina</b>	NofE(a)	Eccles, M. et al. <i>North of England Evidence Based Guideline Development Project. Evidence based clinical practice guideline: the primary care management of stable angina.</i> Newcastle upon Tyne: Centre for Health Services Research. Report No. 98, 1999.
	NCAC	Khunti, K., Baker, R. and Lakhani, M. <i>Management of Angina in General Practice. Audit Protocol CT7.</i> Leicester: Eli Lilly National Clinical Audit Centre, 1995.
<b>Post-MI</b>	MeReC	The National Prescribing Centre. Secondary prevention of myocardial infarction, <i>MeReC Bulletin</i> , 1999, <b>10</b> (2), 5-8.
	NofE(a)	Eccles, M. et al. <i>North of England Evidence Based Guideline Development Project. Evidence based clinical practice guideline: the primary care management of stable angina.</i> Newcastle upon Tyne: Centre for Health Services Research. Report No. 98, 1999.
	NofE(b)	Eccles, M. et al. <i>North of England Evidence Based Guideline Development Project. Evidence based clinical practice guideline. ACE inhibitors in the primary care management of adults with symptomatic heart failure (EBOR).</i> Newcastle upon Tyne: Centre for Health Services Research. Report No. 90, 1998.
<b>Heart Failure</b>	NofE(b)	Eccles, M. et al. <i>North of England Evidence Based Guideline Development Project. Evidence based clinical practice guideline. ACE inhibitors in the primary care management of adults with symptomatic heart failure (EBOR).</i> Newcastle upon Tyne: Centre for Health Services Research. Report No. 90, 1998.
	AHCPR	Konstam, M. et al. <i>Heart Failure: Evaluation and Care of Patients With Left-Ventricular Systolic Dysfunction. Clinical Practice Guideline No. 11.</i> Rockville, MD: Agency for Health Care Policy and Research, Public Health Service, U. S. Department of Health and Human Services. AHCPR Publication No. 94-0612, 1994.

## Background to CPEP

---

The RCGP Clinical Practice Evaluation Programme (CPEP) aims to support the improvement of quality of care by establishing a national programme to assist general practice teams in evaluating the effectiveness of their care for patients. CPEP is a professionally led project, advised by members of a multi-disciplinary group. It is located at the RCGP Effective Clinical Practice Unit, University of Sheffield and led by Professor Allen Hutchinson. CPEP is one of ten NHS National Sentinel Audit programmes and is open to all general practice teams.

The CPEP team is also developing evidence based review criteria for primary care management of **asthma**, **Type 2 diabetes** and **depression** and these will be released as they are completed. The CPEP team hopes to update the review criteria periodically to take into account newly developed and published guidelines.

## Contacting CPEP

---

The CPEP project has a website providing more detailed information about the method for developing the criteria and the evidence base. It will also include sets of evidence based review criteria and aspects of care that can be downloaded directly.

Our website address is **[www.shef.ac.uk/~scharr/public/cpep](http://www.shef.ac.uk/~scharr/public/cpep)**

The CPEP team welcomes feedback about the structure and use of the CHD criteria and can be contacted via e-mail. Unfortunately, at present, we are unable to offer direct support to practices or PCGs in using the criteria.

Our e-mail address is **[CPEP@sheffield.ac.uk](mailto:CPEP@sheffield.ac.uk)**

### Clinical Practice Evaluation Programme

Section of Public Health  
School of Health and Related Research  
University of Sheffield  
Regent Court, 30 Regent Street  
SHEFFIELD.  
S1 4DA.

This booklet may be freely photocopied or downloaded directly from the CPEP website. Multiple printed copies can be obtained from Paula McDowell at the RCGP Clinical and Specific Projects Network on Tel: 0171 344 3115 or Fax: 0171 589 1428.

'This work was undertaken by the RCGP Effective Clinical Practice Programme which received funding from the National Institute for Clinical Excellence. The views expressed in this publication are those of the authors and not necessarily those of the Institute'.

#### Suggested citation:

Hutchinson A, Anderson JP, McIntosh A, Gilbert CL, Field R. *Evidence based review criteria for coronary heart disease*. Sheffield: RCGP Effective Clinical Practice Unit, University of Sheffield, 2000.