Management of stable angina

NICE guideline

Draft for consultation, December 2010

If you wish to comment on this version of the guideline, please be aware that all the supporting information and evidence is contained in the full version.

Contents

This guidance partially updates NICE technology appraisal guidance 73 (published November 2003).

The NICE technology appraisal guidance and supporting documents are available from www.nice.org.uk/guidance/TA73

Introduction

Angina is constricting pain or discomfort that typically occurs in the chest (but may radiate to the neck, shoulders, jaw or arms) and is brought on by physical exertion or emotional stress. It is the main symptom of myocardial ischaemia and is usually caused by atherosclerotic obstructive coronary artery disease restricting blood flow and therefore oxygen delivery to the heart muscle.

The Health Survey for England (2006) reported that around 8% of men and 3% of women aged between 55 and 64 years currently have or have had angina. The figures for men and women aged between 65 and 74 years are around 14% and 8% respectively. It is estimated that almost 2 million people in England currently have or have had angina. Being diagnosed with angina can have a significant impact on a person's quality of life, restricting daily work and leisure activities.

Stable angina is a chronic medical condition. The aim of management is to stop or minimise symptoms, and to improve quality of life and long-term morbidity and mortality. Management options include lifestyle advice, drug treatment and revascularisation using percutaneous or surgical techniques.

Analysis of the comparative efficacy of different treatments for people with stable angina is difficult because of the advances in drug treatment and revascularisation strategies over several decades. Trials of drug treatment versus coronary artery bypass surgery were carried out more than 25 years ago. Statins and other secondary prevention treatments were not used when

the trials were carried out and these treatments have a significant effect on morbidity and mortality. Percutaneous revascularisation techniques have developed, from balloon angioplasty to bare metal stents and drug eluting stents and each is associated with reduced rates of repeat revascularisation.

These developments make it difficult to compare treatment strategies. Trials of revascularisation strategies have also been limited to people considered suitable for both revascularisation strategies rather than being representative of the whole population with angina.

This guideline addresses the management of stable angina. 'Chest pain of recent onset' (NICE clinical guideline 95), covers the diagnosis of stable angina and should be read in conjunction with this guideline.

The guideline assumes that prescribers will use a drug's summary of product characteristics to inform decisions made with individual patients.

Patient-centred care

This guideline offers best practice advice on the care of people with stable angina.

Treatment and care should take into account patients' needs and preferences. People with stable angina should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If patients do not have the capacity to make decisions, healthcare professionals should follow the Department of Health's advice on consent (available from www.dh.gov.uk/consent) and the code of practice that accompanies the Mental Capacity Act (summary available from www.publicguardian.gov.uk). In Wales, healthcare professionals should follow advice on consent from the Welsh Assembly Government (available from www.wales.nhs.uk/consent).

Good communication between healthcare professionals and patients is essential. It should be supported by evidence-based written information tailored to the patient's needs. Treatment and care, and the information patients are given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English.

If the patient agrees, families and carers should have the opportunity to be involved in decisions about treatment and care.

Families and carers should also be given the information and support they need.

Key priorities for implementation

The following recommendations have been identified as priorities for implementation. The recommendations are listed in the order they appear in the list of recommendations in section 1.

- Address personal issues including:
  - self management skills such as pacing activities and goal setting
  - dealing with stress or depression
  - advice about physical exertion including sexual activity. **[1.1.7]**

- Do not routinely perform functional tests for myocardial ischaemia or anatomical tests for obstructive coronary artery disease to stratify risk. **[1.2.3]**

- Do not routinely offer percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG) to people whose symptoms are controlled with drug treatment. **[1.2.4]**

- Offer people optimal drug treatment for the initial management of stable angina. Optimal drug treatment consists of one or two anti-anginal drugs as necessary plus drugs for secondary prevention of cardiovascular disease. **[1.3.1]**

- Consider whether the decision to continue drug treatment or perform revascularisation (PCI or CABG) needs to be discussed by a multidisciplinary team. The team should include an interventional cardiologist and a cardiac surgeon. **[1.4.6]**

- Consider the relative risks and benefits of PCI and CABG using a systematic approach to assess the severity and complexity of the person's coronary disease, in addition to other relevant clinical factors and comorbidities. **[1.4.7]**

- Consider PCI in preference to CABG for people who have single-vessel disease or multi-vessel disease, including left main stem disease, and who

have continuing symptoms despite optimal medical treatment and the anatomy is suitable for PCI **[1.4.8]**

- Consider CABG for people with single-vessel disease or multi-vessel disease, including left main stem disease, and continuing symptoms despite optimal medical treatment if the anatomy is unsuitable for PCI **[1.4.9]**

- Consider CABG in preference to PCI for people with multi-vessel disease who have continuing symptoms despite optimal medical treatment and who:

  - are over 65 years **and/or**
  - have diabetes. **[1.4.10]**

- Ensure people with stable angina receive balanced information and have the opportunity to discuss the benefits, limitations and risks of continuing drug treatment, PCI and CABG to help them make an informed decision about their treatment. **[1.4.11]**

1 Guidance

The following guidance is based on the best available evidence. The full guideline ([add hyperlink]) gives details of the methods and the evidence used to develop the guidance.

1.1 Information and support for people with stable angina

1.1.1 Clearly explain stable angina, including factors that can provoke it (for example, exertion, emotional stress, exposure to cold, a heavy meal) and its long-term course and management.

1.1.2 Encourage the person to ask questions about their angina and its treatment. Provide opportunities for them to voice their concerns and fears.

1.1.3 Discuss the person's, and if appropriate, their family or carer's ideas, concerns and expectations about their condition, prognosis and treatment. Explore and address any misconceptions about stable angina and its implications for daily activities, heart attack risk and life expectancy.

1.1.4 Clearly explain to the person when they should seek emergency or professional help.

1.1.5 Discuss with the person the purpose and any risks and benefits of their treatment.

1.1.6 Assess the person's need for lifestyle advice (for example about exercise, stopping smoking, diet and weight control) and psychological support, and offer interventions as necessary.

1.1.7 Address personal issues including:

- self-management skills such as pacing activities and goal setting
- dealing with stress or depression
- advice about physical exertion including sexual activity.

1.2 General principles for treating people with stable angina

1.2.1 Do not exclude people with stable angina from treatment based on their age alone.

1.2.2 Do not investigate or treat symptoms of stable angina differently in men and women or in different ethnic groups.

1.2.3 Do not routinely perform functional tests for myocardial ischaemia or anatomical tests for obstructive coronary artery disease to stratify risk. [This recommendation partially updates recommendation 1.2 of 'Myocardial perfusion scintigraphy for the diagnosis and management of angina and myocardial infarction' (NICE technology appraisal guidance 73)].

1.2.4 Do not routinely offer percutaneous coronary intervention (PCI) or coronary artery bypass grafting (CABG) to people whose symptoms are controlled with drug treatment.

Treating episodes of angina

1.2.5 Offer a short-acting nitrate for preventing and treating episodes of angina. Advise people:

- how to administer the short-acting nitrate
- to use it immediately before any planned exercise or exertion
- that side effects such as flushing, headache and light-headedness may occur
- to sit down or find something to hold on to if feeling light-headed
- when treating episodes of angina, to repeat the dose after 5 minutes if the pain has not gone
- to call an emergency ambulance if the pain has not gone 5 minutes after taking a second dose of short-acting nitrate.

Drugs for secondary prevention of cardiovascular disease

1.2.6 Consider aspirin 75 mg daily for people with stable angina, taking into account the risk of bleeding and comorbidities.

1.2.7 Do not offer angiotensin-converting enzyme (ACE) inhibitors to manage stable angina. Offer ACE inhibitors to treat other conditions, as appropriate.

1.2.8 Offer statin treatment in line with 'Lipid modification' (NICE clinical guideline 67).

1.2.9 Offer treatment for high blood pressure in line with 'Hypertension' (NICE clinical guideline 34, currently being updated).

Dietary supplements

1.2.10 Do not offer fish oil or vitamin supplements to treat stable angina. Inform people that there is no evidence that they help stable angina.

1.3 Anti-anginal drug treatment

General recommendations

1.3.1 Offer people optimal drug treatment for the initial management of stable angina. Optimal drug treatment consists of one or two anti-anginal drugs as necessary plus drugs for secondary prevention of cardiovascular disease.

1.3.2 Advise people that the aim of anti-anginal drug treatment is to prevent episodes of angina and the aim of secondary prevention treatment is to prevent cardiovascular events such as heart attack and stroke.

1.3.3 Discuss how side effects of drug treatment might affect the person’s daily activities and explain why it is important to take drug treatment regularly.

1.3.4 Review the person's response to treatment, including any side effects, 2–4 weeks after starting or changing drug treatment.

1.3.5 Titrate the drug dosage against symptoms up to the maximum tolerable dosage.

Drugs for treating stable angina

1.3.6 Offer either a beta blocker or a calcium channel blocker as first-line treatment for stable angina. Decide which drug to use based on comorbidities, contraindications and the person's preference.

1.3.7 If the person cannot tolerate the beta blocker or calcium channel blocker or if it is contraindicated, switch to the other option (calcium channel blocker or beta blocker).

1.3.8 If the person's symptoms are not controlled, consider either switching to the other option (calcium channel blocker or beta blocker) or using a combination of the two[1].

1.3.9 Do not routinely offer anti-anginal drugs other than beta blockers or calcium channel blockers as first-line treatment for stable angina.

1.3.10 If the person cannot tolerate beta blockers and calcium channel blockers or they are contraindicated, consider monotherapy with one of the following drugs:

- a long-acting nitrate
- ivabradine
- nicorandil[2] **or**
- ranolazine.

[1] When combining a calcium channel blocker with a beta blocker, a dihydropyridine calcium channel blocker should be used.

[2] At the time of consultation (December 2010), nicorandil did not have UK marketing authorisation for use in this indication. Informed consent should be obtained and documented.

Decide which drug to use based on comorbidities, contraindications, the person's preference and costs.

1.3.11 For people on beta blocker or calcium channel blocker monotherapy whose symptoms are not controlled and the other option (calcium channel blocker or beta blocker) is contraindicated or not tolerated, consider one of the following as an additional drug:

- a long-acting nitrate
- ivabradine[3]
- nicorandil[4] **or**
- ranolazine.

Decide which drug to use based on comorbidities, contraindications, the person's preference and costs.

1.3.12 Do not offer a third anti-anginal drug to people whose stable angina is controlled with two anti-anginal drugs.

1.3.13 Consider adding a third anti-anginal drug when:

- the person’s symptoms are not controlled with two anti-anginal drugs **and**
- the person is waiting for revascularisation or it is not considered appropriate or acceptable.

Decide which drug to use based on comorbidities, contraindications, the person's preference and costs.

[3] At the time of consultation (December 2010), nicorandil did not have UK marketing authorisation for use in this indication. Informed consent should be obtained and documented.

[4] Ivabradine should only be combined with a dihydropyridine calcium channel blocker.

1.4 People whose symptoms are not controlled by optimal drug treatment

1.4.1 Consider revascularisation (PCI or CABG) for people whose symptoms are not controlled with drug treatment.

1.4.2 Review the results of any functional and/or anatomical tests performed at diagnosis when revascularisation is being considered (see 'Chest pain of recent onset', NICE clinical guideline 95).

1.4.3 Offer coronary angiography to guide the revascularisation strategy if not recently completed during diagnosis. Additional non-invasive or invasive functional testing may be required. [This recommendation partially updates recommendation 1.2 of ‘Myocardial perfusion scintigraphy for the diagnosis and management of angina and myocardial infarction’ (NICE technology appraisal guidance 73)].

1.4.4 Consider further investigation to confirm the diagnosis of stable angina if the lack of response to drug treatment raises uncertainty about the diagnosis (see 'Chest pain of recent onset', NICE clinical guideline 95).

Revascularisation strategy

1.4.5 Consider the risks and benefits of continuing drug treatment or performing revascularisation (PCI or CABG) after coronary angiography.

1.4.6 Consider whether the decision to continue drug treatment or perform revascularisation (PCI or CABG) needs to be discussed by a multidisciplinary team. The team should include an interventional cardiologist and a cardiac surgeon.

1.4.7 Consider the relative risks and benefits of PCI and CABG using a systematic approach to assess the severity and complexity of the

person's coronary disease, in addition to other relevant clinical factors and comorbidities.

1.4.8 Consider PCI in preference to CABG for people who have single-vessel disease or multi-vessel disease, including left main stem disease, and who have continuing symptoms despite optimal medical treatment and the anatomy is suitable for PCI.

1.4.9 Consider CABG for people with single-vessel disease or multi-vessel disease, including left main stem disease, and continuing symptoms despite optimal medical treatment if the anatomy is unsuitable for PCI.

1.4.10 Consider CABG in preference to PCI for people with multi-vessel disease who have continuing symptoms despite optimal medical treatment and who:

- are over 65 years **and/or**
- have diabetes.

1.4.11 Ensure people with stable angina receive balanced information and have the opportunity to discuss the benefits, limitations and risks of continuing drug treatment, PCI and CABG to help them make an informed decision about their treatment.

1.4.12 Explain to the person that:

- The purpose of revascularisation is to improve the symptoms of stable angina.
- PCI and CABG are effective in relieving symptoms.
- CABG is slightly more effective than PCI in relieving symptoms of stable angina in the longer term.
- Repeat revascularisation may be necessary after either PCI or CABG and the rate is higher after PCI than CABG.

- Stroke is uncommon after either PCI or CABG, and the incidence is similar between the two procedures.

1.4.13 Inform the person about the practical aspects of PCI and CABG. Include information about:

- vein and/or artery harvesting
- likely length of hospital stay
- recovery time
- drug treatment after the procedure.

1.5 Pain interventions

1.5.1 Do not offer the following interventions to manage stable angina:

- transcutaneous electrical nerve stimulation (TENS)
- enhanced external counterpulsation (EECP)
- acupuncture.

1.6 Stable angina that has not responded to treatment

1.6.1 Offer people whose stable angina has not responded to drug treatment and/or revascularisation comprehensive re-evaluation and advice, which may include:

- exploring the person's understanding of their condition
- exploring the impact of symptoms on the person's quality of life
- reviewing the diagnosis and considering non-ischaemic causes of pain
- reviewing drug treatment and considering future drug treatment and revascularisation options
- explaining how the person can manage the pain themselves
- acknowledging the limitations of future treatment
- specific attention to the role of psychological factors in pain
- development of skills to modify cognitions and behaviours associated with pain.

1.7 Cardiac syndrome X

1.7.1 In people with angiographically normal coronary arteries and continuing anginal symptoms, consider a diagnosis of cardiac syndrome X.

1.7.2 Continue drug treatment for stable angina only if it improves the symptoms of the person with suspected cardiac syndrome X.

1.7.3 Do not routinely offer drugs for the secondary prevention of cardiovascular disease to people with suspected cardiac syndrome X.

2 Notes on the scope of the guidance

NICE guidelines are developed in accordance with a scope that defines what the guideline will and will not cover. The scope of this guideline is available from www.nice.org.uk/NICEtoadddetails.

How this guideline was developed

NICE commissioned the National Clinical Guideline Centre to develop this guideline. The Centre established a Guideline Development Group (see appendix A), which reviewed the evidence and developed the recommendations. An independent Guideline Review Panel oversaw the development of the guideline (see appendix B).

There is more information about how NICE clinical guidelines are developed on the NICE website (www.nice.org.uk/HowWeWork). A booklet, 'How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS' (fourth edition, published 2009), is available from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1739).

3 Implementation

NICE has developed tools to help organisations implement this guidance (see www.nice.org.uk/CGXX)'.

4 Research recommendations

The Guideline Development Group has made the following recommendations for research, based on its review of evidence, to improve NICE guidance and patient care in the future. The Guideline Development Group's full set of research recommendations is detailed in the full guideline (see section 5).

4.1 Adding a newer anti-anginal drug to a calcium channel blocker

What is the clinical and cost effectiveness of adding a newer anti-anginal drug (nicorandil, ivabradine or ranolazine) to a calcium channel blocker for treating stable angina?

Why this is important

We do not know the clinical and cost effectiveness of adding a newer anti-anginal drug to a calcium channel blocker in people with stable angina. We propose a double-blind placebo-controlled randomised trial comparing the addition of a newer anti-anginal drug to a calcium channel blocker with a calcium channel blocker alone in people with stable angina whose symptoms are not being controlled. Endpoints would include symptom severity, quality of life, long-term morbidity and mortality, and cost effectiveness. The results of the trial would influence clinical practice and inform future updates of key recommendations in this guideline.

4.2 Interventional management versus continued drug treatment in people with stable angina and evidence of ischaemia on non-invasive functional testing

Do people with stable angina and evidence of reversible ischaemia on non-invasive functional testing who are on optimal drug treatment benefit from routine coronary angiography with a view to revascularisation?

Why this is important

Revascularisation has traditionally been offered to people with stable angina who have evidence of reversible ischaemia on non-invasive functional testing. Recent trials in people with stable angina (COURAGE, BARI-2D, MASS II) have not shown survival benefit from revascularisation compared with drug treatment. In the nuclear substudy of COURAGE (n = 314), PCI was shown to be more effective in treating ischaemia than optimal drug treatment, and in multivariate analyses reduction of ischaemia was associated with greater event-free survival. It is unclear, however, whether people on optimal drug treatment who have evidence of inducible ischaemia on non-invasive functional testing should routinely have coronary angiography and revascularisation. This question is particularly relevant for people who have responded adequately (for example Canadian Cardiovascular Class 1 or 2) to optimal drug treatment and in whom, based on symptoms alone, revascularisation is not indicated. To answer this question we recommend a randomised trial of interventional management versus continued drug treatment in people with stable angina and myocardial ischaemia on non-invasive functional testing, with all-cause mortality and cardiovascular mortality as the primary endpoints.

4.3 Coronary anatomy investigations

In people with stable angina and multi-vessel disease (including left main stem [LMS] disease) whose symptoms are controlled on optimal drug treatment, would an initial treatment strategy of revascularisation be clinically and cost effective compared with continued drug treatment?

Why this is important

Research is needed to determine whether early investigation and revascularisation can improve longer term survival. People with stable angina may be disadvantaged if they do not have tests to identify whether they have a higher risk profile for early cardiac death, which could be reduced by revascularisation. This disadvantage could be magnified when people who are deemed to fall into very high risk groups (for example, LMS stenosis > 50% in the MASS II trial) are excluded from randomised trials, resulting in the benefits of revascularisation being underestimated. We propose a randomised trial comparing an initial strategy of revascularisation (PCI or CABG) with an initial strategy of continued drug treatment in people with multivessel disease (including LMS disease) in whom revascularisation is not needed for symptom relief. The trial should use drug-eluting stents and wider inclusion criteria than BARI-2D and COURAGE.

4.4 Cardiac rehabilitation

Is an 8-week, comprehensive, multidisciplinary, cardiac rehabilitation service more clinically and cost effective for managing stable angina than current clinical practice?

Why this is important

Cardiac rehabilitation programmes are an established treatment strategy for certain heart conditions, such as for people who have had a heart attack. However, there is no evidence to suggest that cardiac rehabilitation is clinically or cost effective for managing stable angina. Research to date has looked at short-term outcomes, such as a change in diet or exercise levels, but the effect on morbidity and mortality has not been studied. A randomised controlled trial is required to compare comprehensive cardiac rehabilitation with standard care in people with stable angina, with measures of angina severity (exercise capacity, angina frequency, use of a short-acting nitrate), and long-term morbidity and mortality as endpoints.

4.5 Patient self-management plans

What is the clinical and cost effectiveness of a self-management plan for people with stable angina?

Why this is important

Stable angina is a chronic condition. Evidence suggests that addressing people's beliefs and behaviours in relation to angina may improve quality of life, and reduce morbidity and use of resources. Self-management plans could include: educating people with stable angina about the role of psychological factors in pain and pain control; and teaching people self-management skills to modify cognitions, behaviours and affective responses in order to control chest pain. These skills may include pacing of physical activities, modifying stress using cognitive reframing and problem-solving techniques, and relaxation training or mindfulness techniques. The proposed study is a randomised controlled trial in primary care that would assess the clinical and cost effectiveness of self-management plans. This research would inform future updates of key recommendations in the guideline. Furthermore the research would be relevant to a national priority area (National service framework for coronary heart disease [NSF CHD] chapter 4: stable angina and chapter 7: cardiac rehabilitation) as well as the Coalition White Paper 2010 (Equity and excellence: liberating the NHS) that emphasize the importance of increasing people's choice and control in managing their condition.

5 Other versions of this guideline

5.1 Full guideline

The full guideline, 'Management of stable angina' contains details of the methods and evidence used to develop the guideline. It is published by the National Clinical Guideline Centre, and is available from www.ncgc.ac.uk and our website (www.nice.org.uk/CGXXfullguideline). [Note: these details will apply to the published full guideline.]

5.2 Quick reference guide

A quick reference guide for healthcare professionals is available from www.nice.org.uk/CGXXquickrefguide

For printed copies, phone NICE publications on 0845 003 7783 or email publications@nice.org.uk (quote reference number N1XXX). [Note: these details will apply when the guideline is published.]

5.3 'Understanding NICE guidance'

A summary for patients and carers ('Understanding NICE guidance') is available from www.nice.org.uk/CGXXpublicinfo

For printed copies, phone NICE publications on 0845 003 7783 or email publications@nice.org.uk (quote reference number N1XXX). [Note: these details will apply when the guideline is published.]

We encourage NHS and voluntary sector organisations to use text from this booklet in their own information about stable angina.

6 Related NICE guidance

Chronic heart failure (partial update). NICE clinical guideline 108 (2010). Available from www.nice.org.uk/guidance/CG108

Chest pain of recent onset. NICE clinical guideline 95 (2010). Available from www.nice.org.uk/guidance/CG95

Unstable angina and NSTEMI. NICE clinical guideline 94 (2010). Available from www.nice.org.uk/guidance/CG94

Endoscopic saphenous vein harvest for coronary artery bypass grafting. NICE interventional procedure guidance 348 (2010). Available from www.nice.org.uk/guidance/IPG348

Depression in chronic health problems. NICE clinical guideline 91 (2009). Available from www.nice.org.uk/guidance/CG91

Medicines adherence. NICE clinical guideline 76 (2009). Available from www.nice.org.uk/guidance/CG76

Percutaneous laser revascularisation for refractory angina pectoris. NICE interventional procedures guidance 302 (2009). Available from www.nice.org.uk/guidance/IPG302

Transmyocardial laser revascularisation for refractory angina pectoris. NICE interventional procedures guidance 301 (2009). Available from www.nice.org.uk/guidance/IPG301

Spinal cord stimulation for chronic pain of neuropathic or ischaemic origin. NICE technology appraisal guidance 159 (2008). Available from www.nice.org.uk/guidance/TA159

Drug-eluting stents for the treatment of coronary artery disease (part review of NICE technology appraisal guidance 71). NICE technology appraisal guidance 152 (2008). Available from www.nice.org.uk/guidance/TA152

Lipid modification. NICE clinical guideline 67 (2008). Available from www.nice.org.uk/guidance/CG67

Smoking cessation services (2008). NICE public health guidance 10. Available from www.nice.org.uk/guidance/PH10

Ezetimibe for the treatment of primary (heterozygous-familial and non-familial) hypercholesterolaemia. NICE technology appraisal guidance 132 (2007). Available from www.nice.org.uk/guidance/TA132

Myocardial infarction: secondary prevention. NICE clinical guideline 48 (2007). Available from www.nice.org.uk/guidance/CG48

Varenicline for smoking cessation. NICE technology appraisal guidance 123 (2007). Available from www.nice.org.uk/guidance/TA123

Hypertension. NICE clinical guideline 34 (2006). Available from www.nice.org.uk/guidance/CG34

Statins for the prevention of cardiovascular events. NICE technology appraisal guidance 94 (2006). Available from www.nice.org.uk/guidance/TA94

Intraoperative fluorescence angiography in coronary artery bypass grafting. NICE interventional procedure guidance 98 (2004). Available from www.nice.org.uk/guidance/IPG98

Off-pump coronary artery bypass grafting. NICE interventional procedure guidance 35 (2004). Available from www.nice.org.uk/guidance/IPG35 (currently being updated with an expected publication in January 2011)

Guidance on the use of coronary artery stents. NICE technology appraisal guidance 71 (2003). Available from www.nice.org.uk/guidance/TA71

7 Updating the guideline

NICE clinical guidelines are updated so that recommendations take into account important new information. New evidence is checked 3 years after publication, and healthcare professionals and patients are asked for their views; we use this information to decide whether all or part of a guideline needs updating. If important new evidence is published at other times, we may decide to do a more rapid update of some recommendations. Please see our website for information about updating the guideline.

Appendix A: The Guideline Development Group, National Clinical Guideline Centre and NICE project team

Guideline Development Group

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Guideline Commissioning Manager

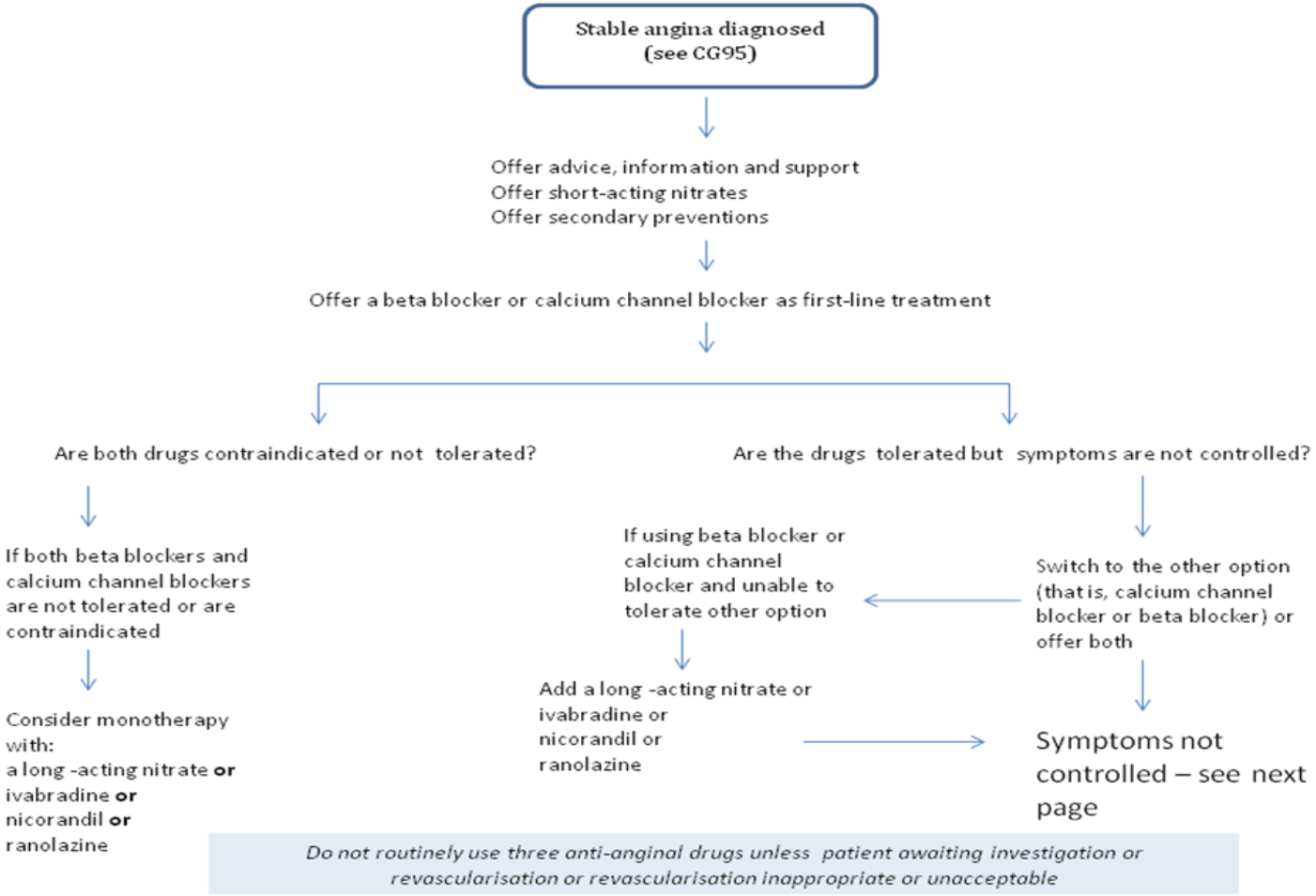
Appendix B: The Guideline Review Panel

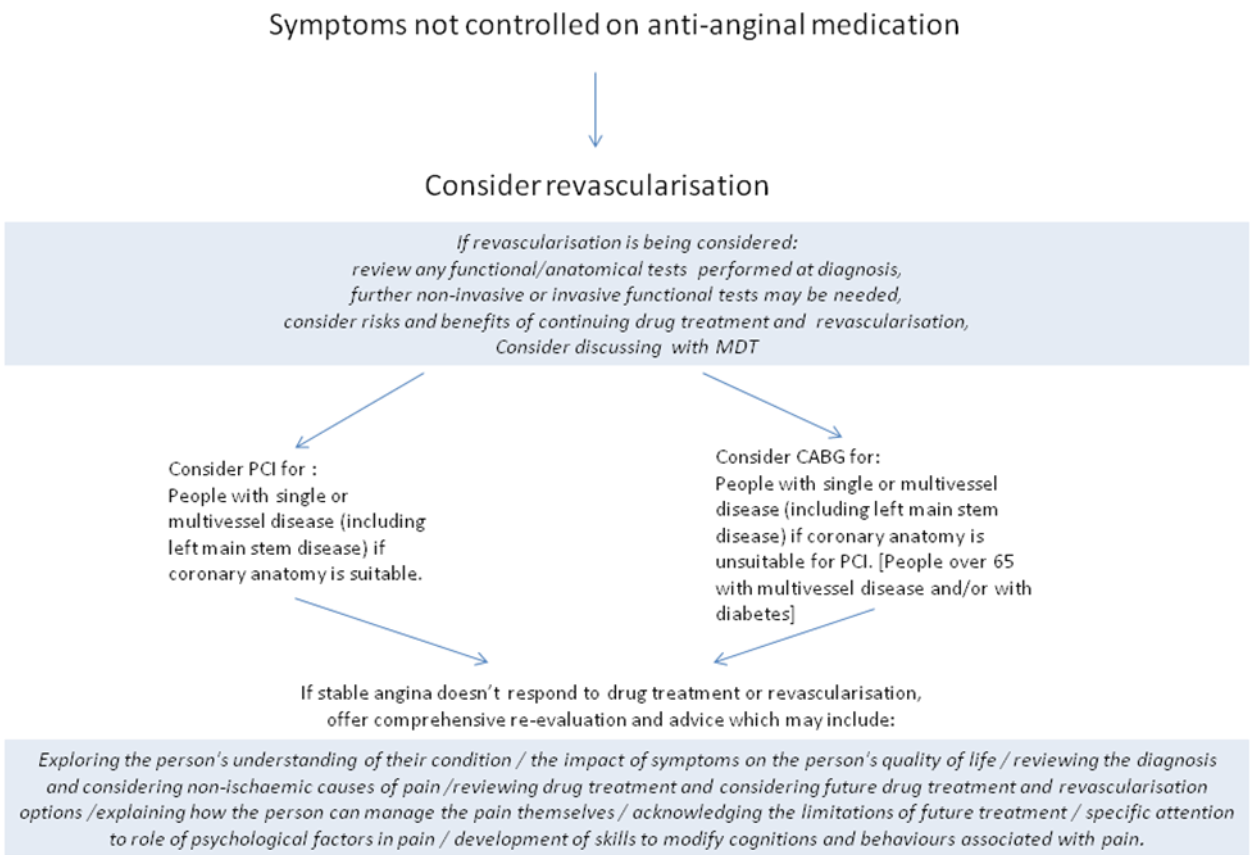
The Guideline Review Panel is an independent panel that oversees the development of the guideline and takes responsibility for monitoring adherence to NICE guideline development processes. In particular, the panel ensures that stakeholder comments have been adequately considered and responded to. The panel includes members from the following perspectives: primary care, secondary care, lay, public health and industry.

[NICE to add]

[Name; style = Unnumbered bold heading]
[job title and location; style = NICE normal]

Appendix C: The algorithms


Stable angina diagnosed (see CG95)
Offer advice, information and support
Offer short-acting nitrates
Offer secondary preventions
Offer a beta blocker or calcium channel blocker as first-line treatment
Are both drugs contraindicated or not tolerated?
Are the drugs tolerated but symptoms are not controlled?
If both beta blockers and calcium channel blockers are not tolerated or are contraindicated
Consider monotherapy with: a long -acting nitrate or ivabradine or nicorandil or ranolazine
If using beta blocker or calcium channel blocker and unable to tolerate other option
Add a long -acting nitrate or ivabradine or nicorandil or ranolazine
Switch to the other option (that is, calcium channel blocker or beta blocker) or offer both
Symptoms not controlled – see next page
Do not routinely use three anti-anginal drugs unless patient awaiting investigation or revascularisation or revascularisation inappropriate or unacceptable


Symptoms not controlled on anti-anginal medication
Consider revascularisation
If revascularisation is being considered:
review any functional/anatomical tests performed at diagnosis,
further non-invasive or invasive functional tests may be needed,
consider risks and benefits of continuing drug treatment and revascularisation,
Consider discussing with MDT
Consider PCI for :
People with single or multivessel disease (including left main stem disease) if coronary anatomy is suitable.
Consider CABG for:
People with single or multivessel disease (including left main stem disease) if coronary anatomy is unsuitable for PCI. [People over 65 with multivessel disease and/or with diabetes]
If stable angina doesn't respond to drug treatment or revascularisation, offer comprehensive re-evaluation and advice which may include:
Exploring the person's understanding of their condition / the impact of symptoms on the person's quality of life / reviewing the diagnosis and considering non-ischaemic causes of pain /reviewing drug treatment and considering future drug treatment and revascularisation options /explaining how the person can manage the pain themselves / acknowledging the limitations of future treatment / specific attention to role of psychological factors in pain / development of skills to modify cognitions and behaviours associated with pain.