NICE National Institute for Health and Care Excellence

NICE Pathways

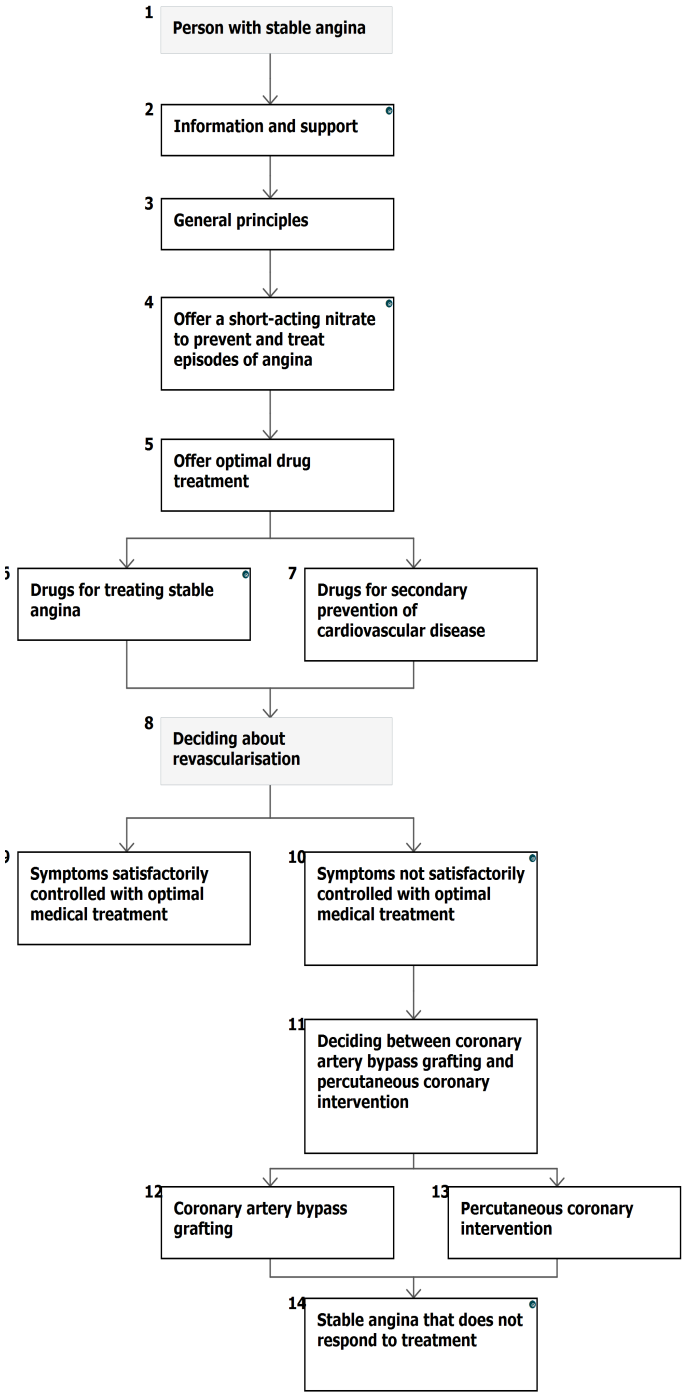
Managing stable angina

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/chest-pain
NICE Pathway last updated: 30 April 2019

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Person with stable angina

No additional information

2 Information and support

Clearly explain stable angina to the person, including factors that can provoke angina (for example, exertion, emotional stress, exposure to cold, eating a heavy meal) and its long-term course and management. When relevant, involve the person's family or carers in the discussion.

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

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.

Advise the person with stable angina to seek professional help if there is a sudden worsening in the frequency or severity of their angina.

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

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.

For further information, see what NICE says on encouraging physical activity to prevent or treat specific conditions and smoking.

Explore and address issues according to the person's needs, which may include:

- self-management skills such as pacing their activities and goal setting
- concerns about the impact of stress, anxiety or depression on angina
- advice about physical exertion including sexual activity.

See what NICE says on multimorbidity.

NICE has written information for the public on managing stable angina.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Air pollution: outdoor air quality and health

4. Advice for people with chronic respiratory or cardiovascular conditions

3 General principles

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

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

Treatments that should not be offered

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

Do not offer the following interventions to manage stable angina:

- transcutaneous electrical nerve stimulation
- enhanced external counterpulsation
- acupuncture.

4 Offer a short-acting nitrate to prevent and treat episodes of angina

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

- 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 a short-acting nitrate is being used to treat episodes of angina, advise people:

- 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.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Stable angina

2. First-line treatment

5 Offer optimal drug treatment

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.

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.

See what NICE says on providing information for medicines optimisation.

6 Drugs for treating stable angina

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.

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

Titrate the drug dosage against the person's symptoms up to the maximum tolerable dosage.

First-line treatment

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.

If the person cannot tolerate the beta blocker or calcium channel blocker, consider switching to the other option (calcium channel blocker or beta blocker).

If the person's symptoms are not satisfactorily controlled on a beta blocker or a calcium channel blocker, consider either switching to the other option or using a combination of the two. (When combining a calcium channel blocker with a beta blocker, use a dihydropyridine calcium channel blocker, for example, slow release nifedipine, amlodipine or felodipine.)

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

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

- a long-acting nitrate **or**
- ivabradine **or**
- nicorandil **or**
- ranolazine.

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

Additional drugs if symptoms not controlled

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 **or**
- ivabradine **or**
- nicorandil **or**
- ranolazine.

Decide which drug to use based on comorbidities, contraindications, the person's preference and drug costs. (When combining ivabradine with a calcium channel blocker, use a dihydropyridine calcium channel blocker, for example, slow release nifedipine, amlodipine, or felodipine.) [1]

[1] Since this guidance was produced, the Medicines and Healthcare products Regulatory Agency (MHRA) have published new advice about safety concerns related to ivabradine (June 2014 and December 2014) and nicorandil (January 2016).

When to offer a third drug

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

Consider adding a third anti-anginal drug only when:

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

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

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

Stable angina

2. First-line treatment

3. Medical treatment before revascularisation

7 Drugs for secondary prevention of cardiovascular disease

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

Consider ACE inhibitors for people with stable angina and diabetes. Offer or continue ACE inhibitors for other conditions, in line with relevant NICE guidance.

Offer statin treatment in line with NICE's recommendations on lipid modification therapy for cardiovascular disease prevention.

Offer treatment for high blood pressure in line with NICE's recommendations on hypertension.

Cardiac syndrome X

Do not routinely offer drugs for the secondary prevention of cardiovascular disease to people

with suspected cardiac syndrome X.

8 Deciding about revascularisation

No additional information

9 Symptoms satisfactorily controlled with optimal medical treatment

Discuss the following with people whose symptoms are satisfactorily controlled with optimal medical treatment:

- their prognosis without further investigation
- the likelihood of having left main stem disease or proximal three-vessel disease
- the availability of CABG to improve the prognosis in a subgroup of people with left main stem or proximal three-vessel disease
- the process and risks of investigation
- the benefits and risks of CABG, including the potential survival gain.

Investigations

After discussion with people whose symptoms are satisfactorily controlled with optimal medical treatment, consider a functional or non-invasive anatomical test to identify people who might gain a survival benefit from surgery. Functional or anatomical test results may already be available from diagnostic assessment.

After discussion with people whose symptoms are satisfactorily controlled with optimal medical treatment, consider coronary angiography when:

- functional testing indicates extensive ischaemia or non-invasive anatomical testing indicates the likelihood of left main stem or proximal three-vessel disease **and**
- revascularisation is acceptable and appropriate.

Coronary artery bypass grafting

Consider CABG for people with stable angina and suitable coronary anatomy whose symptoms are satisfactorily controlled with optimal medical treatment, but coronary angiography indicates left main stem disease or proximal three-vessel disease.

MiraQ for assessing graft flow during coronary artery bypass graft surgery

The following recommendations are from NICE medical technologies guidance on MiraQ for assessing graft flow during coronary artery bypass graft surgery.

The case for adopting the MiraQ system in the NHS for assessing graft flow during CABG surgery is supported by the evidence. The evidence suggests that intraoperative transit time flow measurement is effective in detecting imperfections that may be corrected by graft revision. This may reduce the incidence of graft occlusion and may reduce perioperative morbidity and mortality.

The MiraQ system is associated with an estimated cost saving of £141 per patient compared with clinical assessment, when it is used routinely for assessing coronary artery bypass grafts during surgery.

Detecting, managing and monitoring haemostasis: viscoelastometric point-of-care testing

The following recommendations are an extract from NICE diagnostics guidance on detecting, managing and monitoring haemostasis: viscoelastometric point-of-care testing (ROTEM, TEG and Sonoclot systems).

The ROTEM system and the TEG system are recommended to help detect, manage and monitor haemostasis during and after cardiac surgery.

The Sonoclot system is only recommended for use in research to help detect, manage and monitor haemostasis during and after cardiac surgery. Research is recommended into the clinical benefits and cost effectiveness of using the Sonoclot system during and after cardiac surgery (see section 7.1 of the guidance).

Healthcare professionals using the ROTEM system and the TEG system during cardiac surgery should have appropriate training and experience with these devices.

'Depth of anaesthesia' monitors

The following recommendations are from NICE diagnostics guidance on depth of anaesthesia monitors.

The use of EEG-based depth of anaesthesia monitors is recommended as an option during any

type of general anaesthesia in patients considered at higher risk of adverse outcomes. This includes patients at higher risk of unintended awareness and patients at higher risk of excessively deep anaesthesia. The BIS depth of anaesthesia monitor is therefore recommended as an option in these patients.

The use of EEG-based depth of anaesthesia monitors is also recommended as an option in all patients receiving total intravenous anaesthesia. The BIS monitor is therefore recommended as an option in these patients.

Although there is greater uncertainty of clinical benefit for the E-Entropy and Narcotrend-Compact M depth of anaesthesia monitors than for the BIS monitor, the Committee concluded that the E-Entropy and Narcotrend-Compact M monitors are broadly equivalent to BIS. These monitors are therefore recommended as options during any type of general anaesthesia in patients considered at higher risk of adverse outcomes. This includes patients at higher risk of unintended awareness and patients at higher risk of excessively deep anaesthesia. The E-Entropy and Narcotrend-Compact M monitors are also recommended as options in patients receiving total intravenous anaesthesia.

Anaesthetists using EEG-based depth of anaesthesia monitors should have appropriate training and experience with these monitors and understand the potential limitations of their use in clinical practice.

NICE has published a medtech innovation briefing on End-tidal Control software for use with Aisys closed circuit anaesthesia systems for automated gas control during general anaesthesia.

CardioQ-ODM oesophageal doppler monitor

The following recommendations are from NICE medical technologies guidance on CardioQ-ODM oesophageal doppler monitor.

The case for adopting the CardioQ-ODM in the NHS, when used as described below, is supported by the evidence. There is a reduction in post-operative complications, use of central venous catheters and in-hospital stay (with no increase in the rate of re-admission or repeat surgery) compared with conventional clinical assessment with or without invasive cardiovascular monitoring. The cost saving per patient, when the CardioQ-ODM is used instead of a central venous catheter in the peri-operative period, is about £1100 based on a 7.5-day hospital stay.

The CardioQ-ODM should be considered for use in patients undergoing major or high-risk surgery or other surgical patients in whom a clinician would consider using invasive cardiovascular monitoring.

Interventional procedures

NICE has published guidance on the following procedures with **normal arrangements** for clinical governance, consent and audit:

- endoscopic saphenous vein harvest for coronary artery bypass grafting
- off-pump coronary artery bypass grafting
- endoaortic balloon occlusion for cardiac surgery.

NICE has published guidance on totally endoscopic robotically assisted coronary artery bypass grafting with **special arrangements** for consent and audit or research.

NICE has published guidance on intraoperative fluorescence angiography in coronary artery bypass grafting (see guidance for details).

Medtech innovation briefings

NICE has published medtech innovation briefings on:

- PleuraFlow Active Clearance Technology for maintaining chest tube patency
- VEST external stent for coronary artery bypass grafts
- Sternal Talon for sternal closure in cardiothoracic surgery.

10 Symptoms not satisfactorily controlled with optimal medical treatment

Consider revascularisation (CABG or PCI) for people with stable angina whose symptoms are not satisfactorily controlled with optimal medical treatment.

Offer coronary angiography to guide treatment strategy for people with stable angina whose symptoms are not satisfactorily controlled with optimal medical treatment. Additional non-invasive or invasive functional testing may be required to evaluate angiographic findings and guide treatment decisions.

Ensure that there is a regular multidisciplinary team meeting to discuss the risks and benefits of continuing drug treatment or revascularisation strategy (CABG or PCI) for people with stable angina. The team should include cardiac surgeons and interventional cardiologists. Treatment strategy should be discussed for the following people, including but not limited to:

- people with left main stem or anatomically complex three-vessel disease
- people in whom there is doubt about the best method of revascularisation because of the complexity of the coronary anatomy, the extent of stenting required or other relevant clinical factors and comorbidities.

Provide information for decision making

Ensure people with stable angina receive balanced information and have the opportunity to discuss the benefits, limitations and risks of continuing drug treatment, CABG and PCI to help them make an informed decision about their treatment. When either revascularisation procedure is appropriate, explain to the person:

- The main purpose of revascularisation is to improve the symptoms of stable angina.
- CABG and PCI are effective in relieving symptoms.
- Repeat revascularisation may be necessary after either CABG or PCI and the rate is lower after CABG.
- Stroke is uncommon after either CABG or PCI, and the incidence is similar between the two procedures.
- There is a potential survival advantage with CABG for some people with multivessel disease.

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

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

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Stable angina

4. Multidisciplinary team

11 Deciding between coronary artery bypass grafting and percutaneous coronary intervention

Coronary artery bypass grafting

Offer CABG to people with stable angina and suitable coronary anatomy when:

- their symptoms are not satisfactorily controlled with optimal medical treatment **and**
- revascularisation is considered appropriate **and**
- PCI is not appropriate.

Percutaneous coronary intervention

Offer PCI to people with stable angina and suitable coronary anatomy when:

- their symptoms are not satisfactorily controlled with optimal medical treatment **and**
- revascularisation is considered appropriate **and**
- CABG is not appropriate.

Either procedure appropriate

When either procedure would be appropriate, explain to the person the risks and benefits of PCI and CABG for people with anatomically less complex disease whose symptoms are not satisfactorily controlled with optimal medical treatment. If the person does not express a preference, take account of the evidence that suggests that PCI may be the more cost-effective procedure in selecting the course of treatment.

When either procedure would be appropriate, take into account the potential survival advantage of CABG over PCI for people with multivessel disease whose symptoms are not satisfactorily controlled with optimal medical treatment and who:

- have diabetes **or**
- are over 65 years **or**
- have anatomically complex three-vessel disease, with or without involvement of the left main stem.

Consider the relative risks and benefits of CABG and PCI for people with stable angina 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.

12 Coronary artery bypass grafting

MiraQ for assessing graft flow during coronary artery bypass graft surgery

The following recommendations are from NICE medical technologies guidance on MiraQ for assessing graft flow during coronary artery bypass graft surgery.

The case for adopting the MiraQ system in the NHS for assessing graft flow during CABG surgery is supported by the evidence. The evidence suggests that intraoperative transit time flow measurement is effective in detecting imperfections that may be corrected by graft revision. This may reduce the incidence of graft occlusion and may reduce perioperative morbidity and mortality.

The MiraQ system is associated with an estimated cost saving of £141 per patient compared with clinical assessment, when it is used routinely for assessing coronary artery bypass grafts during surgery.

Detecting, managing and monitoring haemostasis: viscoelastometric point-of-care testing

The following recommendations are an extract from NICE diagnostics guidance on detecting, managing and monitoring haemostasis: viscoelastometric point-of-care testing (ROTEM, TEG and Sonoclot systems).

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'Depth of anaesthesia' monitors

The following recommendations are from NICE diagnostics guidance on depth of anaesthesia monitors.

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Anaesthetists using EEG-based depth of anaesthesia monitors should have appropriate training and experience with these monitors and understand the potential limitations of their use in clinical practice.

NICE has published a medtech innovation briefing on End-tidal Control software for use with Aisys closed circuit anaesthesia systems for automated gas control during general anaesthesia.

CardioQ-ODM oesophageal doppler monitor

The following recommendations are from NICE medical technologies guidance on CardioQ-ODM oesophageal doppler monitor.

The case for adopting the CardioQ-ODM in the NHS, when used as described below, is supported by the evidence. There is a reduction in post-operative complications, use of central venous catheters and in-hospital stay (with no increase in the rate of re-admission or repeat surgery) compared with conventional clinical assessment with or without invasive cardiovascular monitoring. The cost saving per patient, when the CardioQ-ODM is used instead of a central venous catheter in the peri-operative period, is about £1100 based on a 7.5-day hospital stay.

The CardioQ-ODM should be considered for use in patients undergoing major or high-risk surgery or other surgical patients in whom a clinician would consider using invasive

cardiovascular monitoring.

Interventional procedures

NICE has published guidance on the following procedures with **normal arrangements** for clinical governance, consent and audit:

- endoscopic saphenous vein harvest for coronary artery bypass grafting
- off-pump coronary artery bypass grafting
- endoaortic balloon occlusion for cardiac surgery.

NICE has published guidance on totally endoscopic robotically assisted coronary artery bypass grafting with **special arrangements** for consent and audit or research.

NICE has published guidance on intraoperative fluorescence angiography in coronary artery bypass grafting (see guidance for details).

Medtech innovation briefings

NICE has published medtech innovation briefings on:

- PleuraFlow Active Clearance Technology for maintaining chest tube patency
- VEST external stent for coronary artery bypass grafts
- Sternal Talon for sternal closure in cardiothoracic surgery.

13 Percutaneous coronary intervention

Cangrelor

The NICE technology appraisal of cangrelor for reducing atherothrombotic events in people undergoing percutaneous coronary intervention or awaiting surgery requiring interruption of anti-platelet therapy was terminated because no evidence submission was received from The Medicines Company for the technology. Therefore NICE is **unable to make a recommendation** about the use in the NHS of cangrelor for reducing atherothrombotic events in people undergoing PCI or awaiting surgery requiring interruption of anti-platelet therapy.

NICE has published an evidence summary on coronary revascularisation: cangrelor.

Coronary artery stents

The following recommendations are from NICE technology appraisal guidance on the use of coronary artery stents.

Stents should be used routinely where PCI is the clinically appropriate procedure for patients with either stable or unstable angina or with acute myocardial infarction.

This guidance specifically relates to the present clinical indications for PCI and excludes conditions (such as many cases of stable angina) that are adequately managed with standard drug therapy.

NICE has written information for the public on coronary artery stents.

Drug-eluting stents

The following recommendation is from NICE technology appraisal guidance on drug-eluting stents for the treatment of coronary artery disease.

Drug-eluting stents are recommended for use in PCI for the treatment of coronary artery disease, within their instructions for use, only if:

- the target artery to be treated has less than a 3-mm calibre or the lesion is longer than 15 mm, **and**
- the price difference between drug-eluting stents and bare-metal stents is no more than £300.

NICE has written information for the public on drug-eluting stents.

Bioresorbable stents

NICE has published interventional procedures guidance on bioresorbable stent implantation for treating coronary artery disease with **special arrangements** for clinical governance, consent and audit or research.

Interventional procedures

NICE has published guidance on the following procedures with **special arrangements** for consent and audit or research:

- percutaneous insertion of a temporary heart pump for left ventricular haemodynamic support in high-risk percutaneous coronary interventions

- optical coherence tomography to guide percutaneous coronary intervention.

NICE has published guidance on the following procedures with **normal arrangements** for clinical governance, consent and audit:

- percutaneous laser coronary angioplasty
- thrombin injections for pseudoaneurysms.

Medtech innovation briefings

NICE has published medtech innovation briefings on:

- Impella 2.5 for haemodynamic support during high-risk percutaneous coronary interventions
- the PressureWire fractional flow reserve measurement system for coronary artery disease.

People who have previously had PCI

SeQuent Please balloon catheter for in-stent coronary restenosis

The following recommendations are from NICE medical technologies guidance on SeQuent Please balloon catheter for in-stent coronary restenosis.

The case for adopting SeQuent Please balloon catheter in the NHS, when used as described below, is supported by the evidence. The need for subsequent re-intervention for coronary stenosis is reduced as is the duration of clopidogrel therapy, compared with paclitaxel-eluting stent. SeQuent Please balloon catheter is associated with a cost saving of £467 per patient compared with paclitaxel-eluting stent.

SeQuent Please balloon catheter should be considered for use in patients with in-stent restenosis in bare metal coronary artery stents.

SeQuent Please balloon catheter can also be considered as an option for patients with in-stent restenosis in any type of coronary artery stent if:

- there are clinical reasons to minimise the duration of clopidogrel treatment (for example, there is concern about an increased risk of bleeding or there is the need for surgical intervention) **or**
- placement of further stents is not technically possible.

Further research is recommended in a UK setting to compare the outcomes of patients treated with SeQuent Please balloon catheter with the outcomes of patients treated with other types of drug-eluting balloon catheter and stent. This research should report long-term outcomes (for

example, after 3 years), including clinical outcomes and details of further revascularisation required for subsequent restenosis. Research should investigate the use of SeQuent Please balloon catheter for restenosis in drug-eluting coronary artery stents and in de novo coronary stenosis where stenting is either technically difficult or is associated with an increased risk of complications. If research shows that SeQuent Please balloon catheter reduces the rate of restenosis in patients with drug-eluting stents or in native coronary arteries, compared with other technologies, then the number of patients for whom it might be suitable would increase significantly.

14 Stable angina that does not respond to treatment

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
- acknowledging the limitations of future treatment
- explaining how the person can manage the pain themselves
- specific attention to the role of psychological factors in pain
- development of skills to modify cognitions and behaviours associated with pain.

Cardiac syndrome X

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

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

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

Myocardial perfusion scintigraphy

The following recommendation is from NICE technology appraisal guidance on myocardial perfusion scintigraphy for the diagnosis and management of angina and myocardial infarction.

Myyocardial perfusion scintigraphy using SPECT is recommended as part of the investigational strategy in the management of established coronary artery disease in people who remain symptomatic following myocardial infarction or reperfusion interventions.

NICE has written information for the public on myocardial perfusion scintigraphy.

Pain management

Spinal cord stimulation for chronic pain of ischaemic origin

The following recommendations are an extract from NICE technology appraisal guidance on spinal cord stimulation for chronic pain of neuropathic or ischaemic origin.

Spinal cord stimulation **is not recommended** as a treatment option for adults with chronic pain of ischaemic origin except in the context of research as part of a clinical trial. Such research should be designed to generate robust evidence about the benefits of spinal cord stimulation (including pain relief, functional outcomes and quality of life) compared with standard care.

People who are currently using spinal cord stimulation for the treatment of chronic pain of ischaemic origin should have the option to continue treatment until they and their clinicians consider it appropriate to stop.

NICE has written information for the public on spinal cord stimulation for chronic pain of neuropathic or ischaemic origin.

Procedures that should not be used

NICE has published guidance that the following interventional procedures **should not be used**:

- transmyocardial laser revascularisation for refractory angina pectoris
- percutaneous laser revascularisation for refractory angina pectoris.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Stable angina

5. Symptoms not responding to treatment

Glossary

ACE

angiotensin-converting enzyme

BIS

Bispectral Index

CABG

coronary artery bypass graft

ECG

electrocardiogram

EEG

electroencephalography

GRACE

Global Registry of Acute Coronary Events

GTN

glyceryl trinitrate

MPS with SPECT

myocardial perfusion scintigraphy with single photon emission CT

NSTEMI

non-ST-segment elevation myocardial infarction

PCI

percutaneous coronary intervention

SPECT

single photon emission CT

STEMI

ST-segment elevation myocardial infarction

ST-T

ST-segment-T-wave

Sources

Stable angina: management (2011 updated 2016) NICE guideline CG126

Cangrelor for reducing atherothrombotic events in people undergoing percutaneous coronary intervention or awaiting surgery requiring interruption of anti-platelet therapy (terminated appraisal) (2015) NICE technology appraisal 351

Spinal cord stimulation for chronic pain of neuropathic or ischaemic origin (2008) NICE technology appraisal guidance 159

Drug-eluting stents for the treatment of coronary artery disease (2008) NICE technology appraisal guidance 152

Myocardial perfusion scintigraphy for the diagnosis and management of angina and myocardial infarction (2003) NICE technology appraisal guidance 73

Guidance on the use of coronary artery stents (2003) NICE technology appraisal guidance 71

MiraQ for assessing graft flow during coronary artery bypass graft surgery (2011 updated 2018) NICE medical technologies guidance 8

CardioQ-ODM oesophageal doppler monitor (2011) NICE medical technologies guidance 3

SeQuent Please balloon catheter for in-stent coronary restenosis (2010) NICE medical technologies guidance 1

Detecting, managing and monitoring haemostasis: viscoelastometric point-of-care testing

(ROTEM, TEG and Sonoclot systems) (2014) NICE diagnostics guidance 13

Depth of anaesthesia monitors – Bispectral Index (BIS), E-Entropy and Narcotrend-Compact M (2012) NICE diagnostics guidance 6

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and

their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.