


# **MI: secondary prevention**

Implementing NICE guidance


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NICE guidelines on Management of patients after an acute myocardial infarction.

The clinical guideline implementation tools symbol found in the bottom right-hand corner of slides throughout this presentation is used to clearly differentiate between the implementation advice and the key priority recommendations from the guideline. Slides with the tools symbol highlight suggested actions that may be useful when implementing recommendations.



## DISCLAIMER

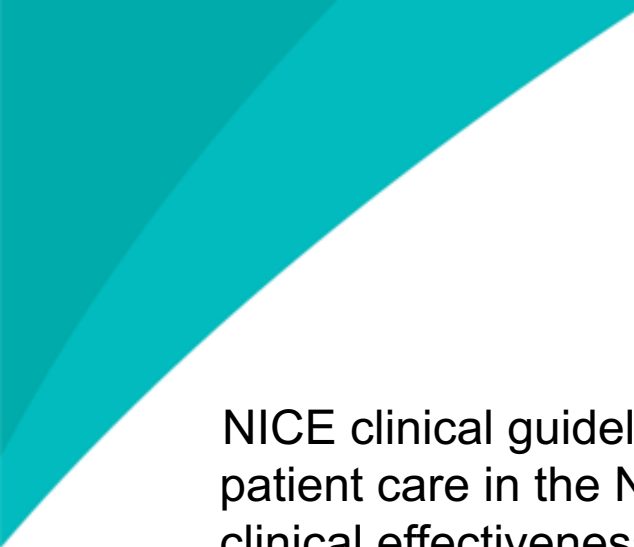
This slide set has been produced by NICE and is an implementation tool and should be used alongside the published guideline. This information does not supersede or replace the guideline itself.

# Changing clinical practice

NICE guidelines are based on the best available evidence.

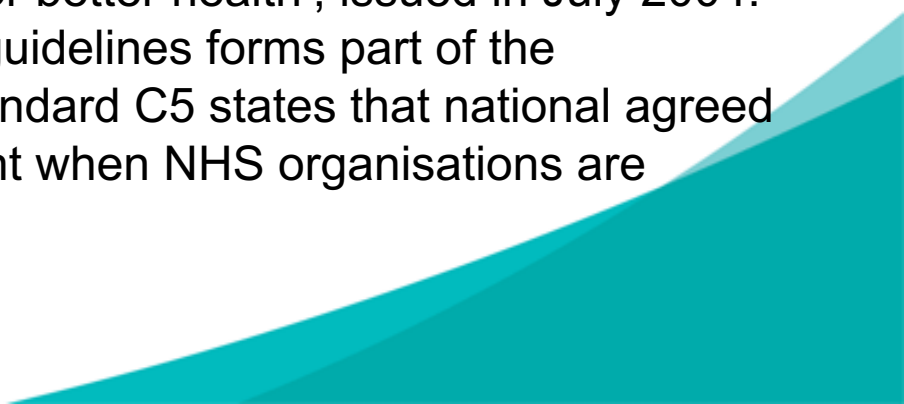
The Department of Health asks NHS organisations to work towards implementing guidelines.

Compliance with developmental standards will be monitored by the Healthcare Commission.



NICE clinical guidelines aim to ensure that promotion of good health and patient care in the NHS are in line with the best available evidence of clinical effectiveness and cost effectiveness. Guidelines help healthcare professionals in their work, but they do not replace their knowledge and skills.

The Healthcare Commission assesses the performance of NHS organisations in meeting core and developmental standards set by the Department of Health in 'Standards for better health', issued in July 2004. The implementation of NICE clinical guidelines forms part of the developmental standard D2. Core standard C5 states that national agreed guidance should be taken into account when NHS organisations are planning and delivering care.





**This presentation covers:**


**Background to the guideline**

**Key recommendations**


**Implementation advice**

**Costs and savings**





This presentation outlines the need for the guideline on secondary prevention of myocardial infarction (MI).




# **Background: the need for this guideline**

**In the UK, about  
838,000 men and  
394,000 women  
have had a  
myocardial  
infarction (MI)**




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One of the Government's national targets is to reduce mortality rates from heart disease and stroke by at least 40% by 2010. Another target is to tackle health inequalities and reduce the gap between the areas with the worst health and the population as a whole by 40%.




# Background

**This guideline offers best practice advice on secondary prevention in primary and secondary care for patients after a myocardial infarction (MI).**

**It includes guidance on the management of patients following an acute MI as well as those who have had an MI in the past.**



The guideline is relevant to:

- local cardiac networks
  - patients who have had an MI, their partners, families and other carers
  - ethnic minority groups and other hard to reach groups
  - physiotherapists
  - dietitians
  - occupational therapists
  - psychology services staff
  - sports scientists
- 

# **Key recommendations**



**Communication of diagnosis and advice**

**Lifestyle advice**

**Cardiac rehabilitation**

**Drug therapy**

**Cardiological assessment**



The key recommendations fall into five areas, which will be considered each in turn.

# **Communication of diagnosis and advice - Hospital discharge summaries**

**To help patients and their carers, as well as providing objective guidance to general practitioners, it is recommended that after an acute MI, every hospital discharge summary should include confirmation of the diagnosis of acute MI, results of investigations, future management plans and advice on secondary prevention.**

This is the key recommendation on communication of diagnosis and advice.

‘After an acute myocardial infarction (MI), confirmation of the diagnosis of acute MI and results of investigations, future management plans and advice on secondary prevention should be part of every discharge summary.’  
(page 6, NICE guideline)

The discharge summary after an MI has an important role in specifying future management, and as such, will aid communication between specialist and generalist care.

# Lifestyle advice

**Patients should be advised to:**

- **Be physically active for 20–30 minutes a day. Patients who are not achieving this should be advised to increase their activity in a gradual way**
- **Quit smoking**
- **Eat a Mediterranean-style diet (more bread, fruit, vegetables and fish)**



The key recommendations on lifestyle advice say that:

‘Patients should be advised to undertake regular physical activity sufficient to increase exercise capacity.’ (page 6, NICE guideline)

‘Patients should be advised to be physically active for 20–30 minutes a day to the point of slight breathlessness. Patients who are not achieving this should be advised to increase their activity in a gradual, step-by-step way, aiming to increase their exercise capacity. They should start at a level that is comfortable, and increase the duration and intensity of activity as they gain fitness.’ (page 6, NICE guideline)

All patients who smoke should be advised to quit and be offered assistance from a smoking cessation service in line with 'Brief interventions and referral for smoking cessation in primary care and other settings' (NICE public health intervention guidance 1)' (page 6, NICE guideline)

'Workplace interventions to promote smoking cessation' (NICE public health intervention guidance 5) specifies which smoking cessation interventions are effective.

NICE public health programme guidance on the optimal provision of smoking cessation services will be available in November 2007.

The final key recommendation states that:

‘Patients should be advised to eat a Mediterranean-style diet (more bread, fruit, vegetables and fish; less meat; and replace butter and cheese with products based on vegetable and plant oils).’ (page 6, NICE guideline)

The guideline also recommends that:

‘After an MI, all patients who are overweight or obese should be offered advice and support to achieve and maintain a healthy weight in line with ‘Obesity: the prevention, identification, assessment and management of overweight and obesity in adults and children’ (NICE clinical guideline 43)’. (page 10, NICE guideline)

# Oily fish

**Patients should be advised to eat at least two to four portions of oily fish per week.**

**If they are not achieving this and have had an MI within the past 3 months, consider providing at least 1 g daily of omega-3-acid ethyl esters treatment licensed for secondary prevention post MI for up to 4 years.**

‘Initiation of omega-3-acid ethyl esters supplements is not routinely recommended for patients who have had an MI more than 3 months earlier’. (page 8, NICE guideline)

Supplements are not suitable for vegetarians.

Information on the different portions of oily fish can be found at [www.food.gov.uk](http://www.food.gov.uk)

# Cardiac rehabilitation

Healthcare professionals, should actively promote cardiac rehabilitation.

Cardiac rehabilitation should be equally accessible and relevant to all patients after an acute MI.



‘The key recommendation on cardiac rehabilitation says that:

‘Cardiac rehabilitation should be equally accessible and relevant to all patients after an MI, particularly people from groups that are less likely to access this service. These include people from black and minority ethnic groups, older people, people from lower socioeconomic groups, women, people from rural communities and people with mental and physical health comorbidities.’  
(page 6, NICE guideline)

‘Healthcare professionals, including senior medical staff involved in providing care for patients after an MI, should actively promote cardiac rehabilitation’ (page 12, NICE guideline)

# Components of cardiac rehabilitation

Cardiac rehabilitation should include:


- **Education**
- **Exercise**
- **Stress management**




‘A home based programme validated for patients who have had an MI that incorporates education, exercise and stress management components with follow-ups by a trained facilitator may be used to provide comprehensive cardiac rehabilitation’ (such as ‘The Edinburgh heart manual’; see [www.cardiacrehabilitation.org.uk/heart\\_manual/heartmanual.htm](http://www.cardiacrehabilitation.org.uk/heart_manual/heartmanual.htm)) (page 12. NICE guideline)

Education should include issues such as:

- when to return to work
- driver and vehicle licensing agency guidelines
- when it is safe to travel by air
- sexual activity
- how to use a perceived exertion scale to help monitor physiological demand
- advice on competitive sport when relevant
- advice to contact Civil Aviation Authority if the patient holds a pilot's licence



The exercise component should be designed to meet the needs of older patients or patients with significant comorbidity.



# **Drug therapy – for all**

**All patients who have had an acute MI should be offered treatment with the following drugs:**

- **ACE (angiotensin-converting enzyme) inhibitor**
- **Aspirin**
- **Beta-blocker**
- **Statin**

There are several key recommendations about drug therapy.

‘All patients who have had an acute MI should be offered treatment with the following drugs:

- ACE (angiotensin-converting enzyme) inhibitor
- aspirin
- beta-blocker
- Statin.

(page 7, NICE guideline)

# Drug therapy – antiplatelet therapy

The combination of aspirin and clopidogrel should be prescribed:

- for 12 months after a non-ST-segment-elevation MI
- for at least 4 weeks in patients given the two drugs during the first 24 hours after an ST-segment-elevation MI.

‘Treatment with clopidogrel in combination with low-dose aspirin should be continued for 12 months after the most recent acute episode of non-ST-segment-elevation acute coronary syndrome. Thereafter, standard care, including treatment with low-dose aspirin alone, is recommended unless there are other indications to continue dual antiplatelet therapy.’ (page 7, NICE guideline)

‘After an ST-segment-elevation MI, patients treated with a combination of aspirin and clopidogrel during the first 24 hours after the MI should continue this treatment for at least 4 weeks. Thereafter, standard treatment including low-dose aspirin should be given, unless there are other indications to continue dual antiplatelet therapy.’ (page 7, NICE guideline)

For guidance on the use of clopidogrel in the treatment of non-ST-segment-elevation acute coronary syndrome, see NICE technology appraisal guidance 80.

# **Drug therapy – aldosterone antagonists**

**Patients with symptoms and signs of heart failure will require an early assessment of LV function.**

**Those with symptoms or signs of heart failure and LVSD should be offered a licensed aldosterone antagonist within 3–14 days of the acute MI.**



These are the other key recommendations about drug therapy:

‘For patients who have had an acute MI and who have symptoms and/or signs of heart failure and left ventricular systolic dysfunction, treatment with an aldosterone antagonist licensed for post-MI treatment should be initiated within 3–14 days of the MI, preferably after ACE inhibitor therapy.’ (page 7, NICE guideline)

Patients who have recently had an acute MI and have clinical heart failure and left ventricular systolic dysfunction, but who are already being treated with an aldosterone antagonist for a concomitant condition (for example, chronic heart failure), should continue with the aldosterone antagonist or an alternative, licensed for early post-MI treatment.

For patients who have had a proven MI in the past and heart failure due to left ventricular systolic dysfunction, treatment with an aldosterone antagonist should be in line with 'Chronic heart failure' (NICE clinical guideline 5). (page 20, NICE guideline)

# Cardiological assessment

All patients should be offered a cardiological assessment to consider whether coronary revascularisation is appropriate.



The key recommendation on cardiological assessment says that:

‘All patients should be offered a cardiological assessment to consider whether coronary revascularisation is appropriate. This should take into account comorbidity.’  
(page 7, NICE guideline)

The Guideline Development Group concluded that there was evidence of effectiveness of coronary revascularisation for secondary prevention in selected stable patients with non-acute coronary disease, and thus patients after MI who had not been considered for coronary revascularisation during the acute phase of management should be considered for further specialist cardiological assessment.

# Implementation advice

Feedback to NICE suggests that there are likely to be three key areas for successful implementation:


- Improving access to services
- Providing training
- Changing prescribing practice.

The new guideline actively embraces non-pharmacological treatments. It puts a major emphasis on cardiac rehabilitation, diet, lifestyle and exercise and particular attention is paid to 'hard to reach' groups.

Delivery of cardiac rehabilitation may involve additional training requirements.

There are also new recommendations in relation to prescribing:

- ACE inhibitors from the outset
- aldosterone antagonists in left ventricular failure
- clopidogrel for patients who have had an acute coronary syndrome.

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Another new recommendation is that all patients who have had an acute MI need to be assessed for coronary revascularisation

# Improving access to services

## All cardiac services

Review and update local patient care pathways to ensure that they are in line with NICE guidance.

Incorporate the secondary prevention of MI audit criteria into local audit templates.





Review and update local patient care pathways to ensure that they are in line with NICE guidance. This includes updating computerised decision support systems.

Encourage local healthcare professionals and clinical governance directorates to incorporate the secondary prevention of MI audit criteria into local audit templates – see [www.nice.org.uk](http://www.nice.org.uk). Use the data your organisation sends to MINAP\_and NACR to monitor implementation of the guideline. Both of these are part of the Central Cardiac Audit Database.

# Improving access to services

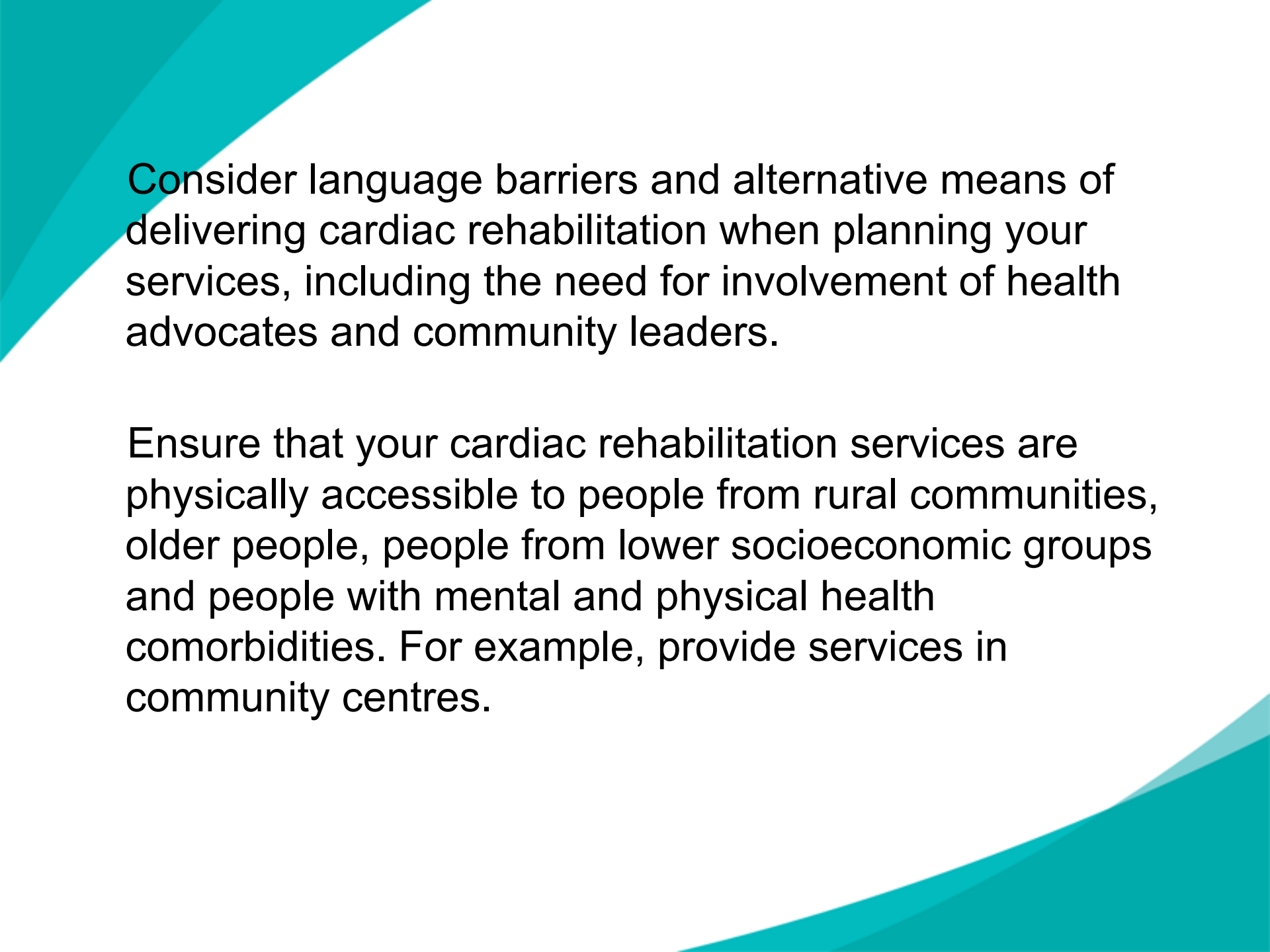
## Cardiac rehabilitation

When planning services, consider:

- The British Association for Cardiac Rehabilitation's 2007 guidance.
- The 'Health equity audit tool' (Department of Health) and 'Heart disease and South Asians' (a best practice guide from the South Asian Health Foundation, the Department of Health and the British Heart Foundation) – to help meet the guideline recommendation on ensuring access to services for vulnerable groups.

Ensure that the details of the cardiac rehabilitation services available in your area are included in the NACR database so that they can be readily located.



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Consider language barriers and alternative means of delivering cardiac rehabilitation when planning your services, including the need for involvement of health advocates and community leaders.

Ensure that your cardiac rehabilitation services are physically accessible to people from rural communities, older people, people from lower socioeconomic groups and people with mental and physical health comorbidities. For example, provide services in community centres.

Encourage local GP practices to use their CHD registers to ensure that all patients who have had an acute MI are offered cardiac rehabilitation in line with the NICE guideline, and to monitor uptake and completion of cardiac rehabilitation programmes.

Ensure that the details of the cardiac rehabilitation services available in your area in the NACR database so that they can be readily located.

Consider using 'Understanding NICE Guidance' and the British Heart Foundation's cardiac rehabilitation campaign information to promote awareness among clinicians and patients. Refer also to the Food Standards Agency website ([www.food.gov.uk](http://www.food.gov.uk)) when discussing with patients portions of oily fish.

# Improving access to services

## Strengthen communication

Consider using a template discharge plan and develop a strategy to make this plan available in a timely manner.

Ensure systems are in place whereby cardiac rehabilitation is promoted by all healthcare professionals.



Review communication arrangements to ensure sharing of information between the ward discharging the patient, the cardiac rehabilitation service and the patient's GP and practice nurses.

Develop a strategy to ensure discharge summaries are made available in a timely manner. You may want to use a computerised discharge system to achieve this. You may also want to consider the use of patient hand-held records.

Ensure systems are in place so that cardiac rehabilitation is promoted by all healthcare professionals and offered to all patients who have had an acute MI prior to discharge from hospital.

# Improving access to services – discharge template

All post-MI discharge templates should include:

- **Diagnosis and the details of medications**
- **Advice on targets for titration and monitoring of ACE inhibitors and statins**
- **Management plan**
- **Procedures performed**
- **Follow-up appointments**
- **Possible referrals**

Consider using a template discharge plan as part of your protocol. You could include three types of information in your template. First, the diagnosis and the details of medications (including dosage, start dates and dates when medications should be stopped). If the patient is not treated with the medication recommended in the guideline, you should record the reason, for example, 'Not tolerated'. Second, include any advice on targets for titration and monitoring of ACE inhibitors and statins. Third, outline the management plan, including cardiac rehabilitation and any goals agreed with the patient, procedures performed (such as an echocardiogram), follow-up appointments, and possible referrals (for example, to a smoking cessation service).



# Providing training

Review staff training needs in relation to NICE guideline recommendations, in particular competences related to lifestyle advice.

Incorporate NICE guideline recommendations into existing and new CPD programmes.



Review staff training needs in relation to NICE guideline recommendations, in particular competences related to lifestyle advice. Refer to 'Brief interventions and referral for smoking cessation in primary care and other settings' (NICE public health intervention guidance 1) so that all patients who smoke are advised to quit and offered assistance from a smoking cessation service in line with this guidance.

Consider collaborating with your deanery, cardiac network, higher education institutions, local strategic health authority, workforce development directorate and professional bodies to review the content of existing training programmes. Incorporate NICE guideline recommendations into existing and new continuing professional development programmes. Consider preregistration training, training for new staff, including induction, and updating for existing staff. Refer to the National Workforce Competence Framework for CHD for existing staff.

# Providing training

Consider engaging with local cardiac patient support groups when planning and providing training.



The National Workforce Competence Framework for CHD can be found at: [www.Skillsforhealth.org.uk](http://www.Skillsforhealth.org.uk)

Local cardiac patient groups can be found via the British Heart Foundation.



# Changing prescribing practice

Work with the clinical lead to ensure care pathways meet the guideline's recommendations on prescribing practice.

Develop robust local policies so that omega-3-acid ethyl esters supplements are not routinely recommended for patients who have had an MI more than 3 months earlier.



Work with the clinical lead to ensure care pathways after acute MI include assessment of LVSD before discharge for patients with any symptoms and/or signs of heart failure so that a licensed aldosterone antagonist can be initiated within 3–14 days of the acute MI. For example, consider the impact changing care pathways to include earlier echocardiograms may have on services.

Ensure that the pathway also includes guidance for management of patients with established heart failure.

Develop robust local policies so that omega-3-acid ethyl esters supplements are not routinely recommended for patients who have had an MI more than 3 months earlier. Local policies should also ensure that patients who have had an MI within the past 3 months and who do not consume at least two to four portions of oily fish per week are considered for treatment with at least 1 g daily of omega-3-acid ethyl esters licensed for secondary prevention post MI for up to 4 years.

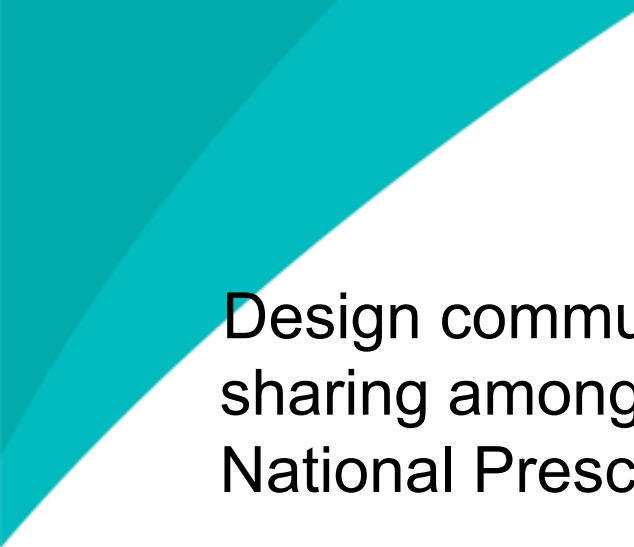
# Changing prescribing practice

Engage with your prescribing adviser to ensure information is disseminated to GP practices and pharmacists undertaking medicines use reviews.

Work with your local drugs and therapeutics committees and with local area prescribing committees to incorporate guideline changes into joint formularies shared by primary and secondary care.





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Design communication systems to facilitate information sharing among acute trusts, cardiac networks and the National Prescribing Centre.

Use resources provided by the National Prescribing Centre to disseminate information about prescribing recommendations.

Use NICE audit criteria to ensure prescribing protocols are followed.

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# Costs and savings

Recommendations with a significant resource impact	Year 1 costs £000
Omega-3-acid ethyl esters	7,071
Aldosterone antagonists	21,749
Cardiac rehabilitation	17,810
Patient engagement	2,537
Revascularisation assessment	8,521
<b>Total recurrent costs</b>	<b>57,688</b>
<b>Opportunity savings</b>	
Reduction in further MIs	-3,501
Reduction in hospitalisations due to heart failure	-2,433
<b>Total opportunity savings</b>	<b>-5,934</b>

**These are the predicted national costs of implementing the guideline recommendations that have a significant resource impact. The costing report has full details.**

**The opportunity savings arise from a reduction in subsequent MIs following cardiac rehabilitation and omega-3-acid ethyl esters treatment, and from a reduction in hospitalisations following aldosterone antagonists treatment.**