

# **Clopidogrel in the treatment of non-ST-segment-elevation acute coronary syndrome**

**Understanding NICE guidance –  
information for people with  
non-ST-segment-elevation acute  
coronary syndrome, their families  
and carers, and the public**

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## **Clpidogrel in the treatment of non-ST-segment-elevation acute coronary syndrome**

**Understanding NICE guidance – information for people with non-ST-segment-elevation acute coronary syndrome, their families and carers, and the public**

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### **To order copies**

Copies of this booklet can be ordered from the NHS Response Line; telephone 0870 1555 455 and quote reference number N0614. A version in Welsh and English is also available, reference number N0615. Mae fersiwn yn Gymraeg ac yn Saesneg ar gael hefyd, rhif cyfeirnod N0615. The NICE technology appraisal on which this information is based, *Clpidogrel in the treatment of non-ST-segment-elevation acute coronary syndrome*, is available from the NICE website ([www.nice.org.uk/TA080guidance](http://www.nice.org.uk/TA080guidance)). A short version of the guidance (a 'quick reference guide') is available from the website ([www.nice.org.uk/TA080quickrefguide](http://www.nice.org.uk/TA080quickrefguide)) or from the NHS Response Line, reference number N0613.

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## What is NICE guidance?

The National Institute for Clinical Excellence (NICE) is part of the NHS. It produces guidance (recommendations) on the use of medicines, medical equipment, diagnostic tests and clinical and surgical procedures within the NHS in England and Wales.

To produce this guidance, NICE looks at how well the medicine, equipment or procedure works and also how well it works in relation to how much it costs. This process is called an appraisal. The appraisal process involves the manufacturer of the medicine or equipment for which guidance is being produced and the organisations that represent the healthcare professionals, patients and carers who will be affected by the guidance.

NICE was asked to look at the available evidence on the use of clopidogrel for non-ST-segment-elevation acute coronary syndrome. NICE was asked to provide guidance that will help the NHS in England and Wales decide when clopidogrel should be used.

# What is non-ST-segment-elevation acute coronary syndrome?

Non-ST-segment-elevation acute coronary syndrome is a medical term used to describe two heart problems:

- unstable angina
- non-ST-segment-elevation myocardial infarction (NSTEMI for short).

These both happen for the same reason, and the symptoms are similar. Doctors find it difficult to tell one from the other until they get the results of a patient's blood tests. The conditions are described in the next sections.

## Unstable angina

Angina happens if there's not enough blood and oxygen getting to the heart. Like most of our muscles, the heart needs oxygen to work. The blood picks up oxygen from the lungs and then carries it back to the heart through blood vessels called coronary arteries. If these arteries have become narrow, there may be times when there's not enough blood and oxygen getting to the heart and this can cause symptoms (this is when the person has an attack of their angina). For example, this might happen during exercise when the heart is working harder than normal and needs more oxygen.

A person having an angina attack feels pain, heaviness or tightness in the centre of their chest. This may spread to their arms, neck, jaw, back or stomach. Or sometimes, it's just these areas that are affected. Unstable angina is the medical term used to describe angina pain that happens even if the person is resting or is doing something that doesn't take much effort. Unstable angina comes on quickly and it signals that something has just happened in the artery that has made it more blocked than normal.

## **Non-ST-segment-elevation myocardial infarction (NSTEMI)**

Non-ST-segment-elevation myocardial infarction happens for the same reasons as unstable angina. But in this case, so little blood and oxygen is able to get through a narrow coronary artery that some of the heart tissue becomes damaged because it has been starved of oxygen. Like unstable angina, this comes on quickly, and the person usually feels severe chest pain.

## What is clopidogrel?

People who have unstable angina or non-ST-segment-elevation myocardial infarction are at risk of having a major heart attack. This happens when so little oxygen reaches the heart that part of it dies off. One of the aims of treating a person with unstable angina or NSTEMI is to reduce the likelihood of this happening.

The medicine clopidogrel helps to stop blood clots forming in the arteries – it's known as an antiplatelet drug. As blood clots could also block the coronary arteries, stopping them from happening is a way of stopping things getting worse.

## What has NICE recommended?

During the appraisal, NICE's Appraisal Committee read and heard evidence from:

- good-quality studies of clopidogrel
- doctors with specialist knowledge of non-ST-segment-elevation acute coronary syndrome and its treatment
- individuals with specialist knowledge of the issues affecting people with non-ST-segment-elevation acute coronary syndrome

- organisations representing the views of people who will be affected by the guidance (because they have, or care for someone with, the condition or because they work in the NHS and are involved in providing care for people with the condition)
- the manufacturers of clopidogrel.

The evidence is summarised in the full guidance (see end for details). More information about the studies is provided in the assessment report for this appraisal (see end for details).

NICE has made the following recommendations about the use of clopidogrel to treat non-ST-segment-elevation acute coronary syndrome within the NHS in England and Wales.

Clopidogrel, together with a low dose of aspirin, should be used for people with non-ST-segment-elevation acute coronary syndrome who have a moderate to high risk of a major heart attack (myocardial infarction) or death.

Whether a person is at moderate to high risk of a major heart attack can be judged from their symptoms and by one or both of the following test results.

- New ECG changes that show that the person's heart is not receiving enough blood. (An ECG, or heart trace, is a test that shows how the heart is beating. Doctors can tell from the pattern on the ECG if there are problems.)
- Blood tests that show that there has been some damage to the heart tissue.

Treatment with clopidogrel and low-dose aspirin should be continued for up to 12 months after the most recent attack. After this time, doctors should give the normal treatment, which includes a low dose of aspirin.

## **What should I do next?**

If you or someone you care for has non-ST-segment-elevation acute coronary syndrome, you should discuss this guidance with the specialist looking after you or them.

## **Will NICE review its guidance?**

Yes. The guidance will be reviewed in July 2007.

## Further information

The NICE website ([www.nice.org.uk](http://www.nice.org.uk)) has further information about NICE and the full guidance on clopidogrel in the treatment of non-ST-segment-elevation acute coronary syndrome that has been issued to the NHS. The assessment report, which contains details of the studies that were looked at, is also available from the NICE website. A short version of the guidance (a 'quick reference guide') is available on the website and from the NHS Response Line (telephone 0870 1555 455 and quote reference number N0613).

If you have access to the Internet, you can find more information about heart conditions on the NHS Direct website ([www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)). You can also phone NHS Direct on 0845 46 47.





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