



Support for commissioning for acute coronary syndromes (including myocardial infarction)

Support for commissioning

Published: 5 September 2014

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Overview and resources

This resource helps with quality improvement by providing information on key clinical, cost and service-related issues to consider during the commissioning process and signposting other implementation support tools. It has been produced to support NICE quality standard 68 for [acute coronary syndromes \(including myocardial infarction\)](#).

We welcome your feedback on using this resource. See the [feedback section](#) for details.

[More information about NICE support for commissioning](#)

Use the NICE pathways on [acute coronary syndromes](#) and [myocardial infarction with ST-segment elevation](#) for fast access to NICE guidance and implementation resources to support commissioning for these conditions.

[Why the quality standard on acute coronary syndromes \(including myocardial infarction\) is needed.](#)

Who is responsible for commissioning for acute coronary syndromes (including myocardial infarction)?

- Clinical commissioning groups (CCGs) are responsible for commissioning ambulance, A&E and cardiac services.

- CCGs are also responsible for commissioning percutaneous coronary intervention (PCI) for adults with non-ST-segment-elevation myocardial infarction (NSTEMI).
- NHS England is responsible for commissioning primary PCI for adults with acute ST-segment-elevation-myocardial infarction (STEMI) as part of adult specialist cardiac services.

Who should clinical commissioning groups and NHS England area teams work with?

- Clinical commissioning groups and NHS England through specialised service area teams should work in partnership with service providers, via strategic clinical networks for cardiovascular disease, to improve the quality of assessment and clinical management for adults with acute coronary syndromes.
- Providers that they should work with are ambulance services, hospital trusts with A&E and cardiology departments, and adult specialist cardiac centres. Referrals to cardiac services will be received from primary care, ambulance, A&E, other secondary care areas, or other hospitals.

The quality statements and their commissioning and resource implications

Quality statement 1: Diagnosis of acute myocardial infarction

Adults with a suspected acute coronary syndrome are assessed for acute myocardial infarction using the criteria in the universal definition of myocardial infarction.

Rationale

Acute myocardial infarction can have a poor prognosis so prompt and accurate diagnosis is important to ensure that appropriate treatment and care is offered as soon as possible. Treatment for adults with suspected acute coronary syndrome is often started before a diagnosis is confirmed. Confirming the diagnosis using the criteria in the universal definition of myocardial infarction is important to ensure that any ongoing treatment is appropriate and any inappropriate treatment is stopped.

Commissioner and provider actions

Clinical commissioning groups (CCGs) should:

- commission services in which adults with a suspected acute coronary syndrome are assessed according to the universal definition of myocardial infarction to ensure that ongoing care is appropriate
- consider incentivising use of the universal definition in assessments via CQUIN payments.

Cardiac service providers should:

- ensure that all healthcare professionals providing assessments for adults with a suspected acute coronary syndrome have the skills and training to apply the universal definition of myocardial infarction
- consider collecting data via local audit on the use of the universal definition of myocardial infarction to demonstrate to commissioners that ongoing treatment is appropriate.

For the [universal definition of myocardial infarction](#), see the quality standard for acute coronary syndromes (including myocardial infarction).

Estimated resource impact

- Tests for diagnosing myocardial infarction using the universal definition are likely to be done already and so no significant increase in costs is anticipated. However, there may be some training costs associated with applying the universal definition and these should be assessed by individual providers.
- The [costing report for the NICE guideline on chest pain of recent onset](#) (NICE clinical guideline 95) suggests that savings may be possible locally depending on current practices for testing and diagnosis.

Quality statement 2: Risk assessment for adults with NSTEMI or unstable angina

Adults with non-ST-segment-elevation myocardial infarction (NSTEMI) or unstable angina are assessed for their risk of future adverse cardiovascular events using an established risk scoring system that predicts 6-month mortality to guide clinical management.

Rationale

Assessing and categorising risk of future adverse cardiovascular events by formal risk assessment, for example using the GRACE scoring system, in people who have been diagnosed with NSTEMI or

unstable angina is important for determining early management strategies. It also allows the benefits of treatment to be balanced against the risks of treatment-related adverse events. Failure to categorise future risk can lead to people being given inappropriate treatment.

Commissioner and provider actions

CCGs should:

- commission cardiac services in which all adults with NSTEMI or unstable angina are assessed for their risk of future adverse cardiovascular events using an established risk scoring system that predicts 6-month mortality, and the results are documented in the patients' records
- ensure that the risk of future adverse cardiovascular events is used by cardiac specialists to guide the clinical management of adults with NSTEMI or unstable angina
- consider incentivising formal risk assessment and recording by cardiac service providers using CQUIN payments based on local audit data ([NICE clinical guideline 94 audit support tool](#)).

Cardiac service providers should:

- design care pathways to include the use of an established risk scoring system that predicts 6-month mortality (for example, Global Registry of Acute Cardiac Events [GRACE]), with assessment including full clinical history, a physical examination, resting 12-lead ECG and blood tests
- ensure that the risk of future adverse cardiovascular events in adults with NSTEMI or unstable angina is based on findings from the established risk scoring system and used by all cardiac specialists to guide clinical management and provide appropriate care.

For definitions of [assessment for risk of future adverse cardiovascular events](#) and [categories for risk of future adverse cardiovascular events](#) to guide clinical management, see the quality standard on acute coronary syndromes (including myocardial infarction).

Estimated resource impact

- Expert opinion indicates that some risk scoring is currently undertaken. No additional costs are anticipated from using established risk scoring systems. However, there may be costs associated with training healthcare professionals in using risk scoring systems and these need to be considered locally.

- The use of a risk scoring system may lead to a reduction in inappropriate testing. The benefits should be measured locally.

Quality statement 3: Coronary angiography and PCI within 72 hours for NSTEMI or unstable angina

Adults with non-ST-segment-elevation myocardial infarction (NSTEMI) or unstable angina who have an intermediate or higher risk of future adverse cardiovascular events are offered coronary angiography (with follow-on percutaneous coronary intervention [PCI] if indicated) within 72 hours of first admission to hospital.

Rationale

Coronary angiography is important to define the extent and severity of coronary disease. In people with an intermediate or higher risk of future adverse cardiovascular events, coronary angiography within 72 hours of admission to hospital offers advantages over an initial conservative strategy, provided there are no contraindications to angiography (such as active bleeding or comorbidity). Services should provide coronary angiography (with follow-on PCI if indicated) as soon as it offers net clinical benefits; they should not wait until 72 hours if this is sooner.

Commissioner and provider actions

- CCGs and cardiac service providers should collaborate to commission services with sufficient capacity and expertise to offer coronary angiography (and if indicated PCI) within 72 hours of first hospital admission to adults with NSTEMI or unstable angina who have an intermediate or higher risk of future adverse cardiovascular events.
- CCGs and cardiac service providers should optimise and accelerate cardiac treatment pathways ([Department of Health Cardiovascular Disease Outcome Strategy](#)) to reduce variation in access times and ensure cardiac specialists are always available to deliver care. Raising awareness of these pathways will ensure that all adults with NSTEMI or unstable angina are seen and assessed by cardiac specialists and receive evidence-based treatments in a timely manner.
- CCGs may wish to ask cardiac service providers to use the [audit support tool for the NICE guideline on unstable angina and NSTEMI](#) (NICE clinical guideline 94) to demonstrate that they are offering coronary angiography (and if indicated PCI) to adults with NSTEMI or unstable angina at intermediate or higher risk within 72 hours of first hospital admission.

Estimated resource impact

- No significant cost increase is anticipated. There may be a small increase in the number of angiography procedures, but procedures should be performed during the initial admission rather than having a separate elective admission for angiography.
- If organisations are not currently offering coronary angiography within 72 hours of admission, there may be some costs associated with accelerating time to treatment, depending on existing service provision. This should be assessed locally.
- It is expected that for adults at intermediate or higher risk the time to angiography will be reduced. This may generate provider savings or free up capacity as length of hospital stays are reduced. Any increase in the number of angiography procedures will be offset by savings from reduced hospital stays. Each excess bed day avoided could save CCGs around £210 (HRG EA36A – catheter 19 years and older).
- See the [costing statement for the guideline on unstable angina and NSTEMI](#) (NICE clinical guideline 94) for further discussions on the potential savings which might apply depending on local current practice.

Quality statement 4: Coronary angiography and PCI for adults with NSTEMI or unstable angina who are clinically unstable

Adults with non-ST-segment-elevation myocardial infarction (NSTEMI) or unstable angina who are clinically unstable have coronary angiography (with follow-on percutaneous coronary intervention [PCI] if indicated) as soon as possible but within 24 hours of becoming clinically unstable.

Rationale

Coronary angiography is important to define the extent and severity of coronary disease. The benefits of an early invasive strategy appear to be greatest in people at higher risk of future adverse cardiovascular events. In people with NSTEMI or unstable angina who are clinically unstable, coronary angiography (with follow-on PCI if indicated) should be done as soon as possible so that appropriate treatment can be given, and may reduce lengthy hospital stays and prevent further cardiovascular events in both the short and long term. The timing of coronary angiography will be different for each person, but should be within 24 hours of becoming clinically unstable.

Commissioner and provider actions

CCGs should:

- work with ambulance services and cardiac service providers to optimise and accelerate cardiac treatment pathways ([Department of Health Cardiovascular Disease Outcomes Strategy](#)) to reduce variation in access times and ensure cardiac specialists are always available to deliver care
- collaborate with cardiac service providers to commission services with sufficient capacity and expertise to offer coronary angiography (and if indicated PCI) within 24 hours of admission to adults with NSTEMI or unstable angina who are clinically unstable
- consider asking cardiac service providers to use a patient questionnaire, including questions on how quickly PCI was given, to assess the quality of care and outcomes from the service user's perspective.

For a definition of [clinically unstable](#), see the quality standard on acute coronary syndromes (including myocardial infarction).

Estimated resource impact

- No significant cost increase is anticipated. There may be a small increase in the number of angiography procedures, but the likelihood of further cardiovascular events will be reduced resulting in fewer future emergency admissions.
- Any increase in the number of angiography procedures will be offset by savings from avoiding future emergency admissions. Each emergency admission for actual or suspected myocardial infarction avoided could save CCGs £3371 (HRG EB10Z).
- See the [costing statement for the guideline on unstable angina and NSTEMI](#) (NICE clinical guideline 94) for further discussions on the potential savings which might apply, depending on local current practice.

Quality statement 5: Level of consciousness and eligibility for coronary angiography and primary PCI

Adults who are unconscious after cardiac arrest caused by suspected acute ST-segment-elevation-myocardial infarction (STEMI) are not excluded from having coronary angiography (with follow-on primary percutaneous coronary intervention [PCI] if indicated).

Rationale

People who remain unconscious after cardiac arrest should not be treated differently from people who are conscious. They should be able to have the same treatments within the same timescales and should be admitted to centres capable of undertaking primary PCI. Carrying out immediate primary PCI, if successful, could stabilise the person's heart and may reduce the risk of further complications.

Commissioner and provider actions

- Ambulance services and cardiac service providers should raise awareness among healthcare professionals that eligibility for coronary reperfusion therapy is not based on level of consciousness alone in any patient, ensuring equity of service provision.
- CCGs and NHS England should work with ambulance services and cardiac service providers to design care pathways that do not use level of consciousness to determine eligibility for coronary angiography (with follow-on primary PCI if indicated).

Estimated resource impact

- Expert clinical opinion suggests that the level of consciousness is currently used by some healthcare professionals to determine whether a person is eligible for coronary angiography (with follow-on primary PCI if indicated), although robust data are not available. The number of people who receive primary PCI after STEMI is likely to increase, leading to associated improved health outcomes.
- Using the 2014/15 national tariff and activity weighting from reference costs 2011/12, the unit cost of primary PCI (£3751) is the weighted average for non-elective admissions for healthcare resource groups (HRGs) EA31Z Percutaneous Coronary Intervention (0–2 Stents) and EA49Z Percutaneous Coronary Interventions with 3 or more Stents, Rotablation, IVUS or Pressure Wire. Using the 2014/15 national tariff the unit cost of no reperfusion treatment (£3371) is the non-elective admission tariff for HRG EB10Z Actual or Suspected Myocardial Infarction.
- Increasing the number of people who receive a primary PCI rather than no reperfusion strategy is therefore likely to increase costs to NHS England commissioners. These costs are estimated to be up to £1.1 million for the population of England each year. See the [costing report for the guideline on myocardial infarction with STEMI](#) (NICE clinical guideline 167) for more information on the resource impact.

Quality statement 6: Primary PCI for acute STEMI

Adults with acute ST-segment-elevation myocardial infarction (STEMI) who present within 12 hours of onset of symptoms have primary percutaneous coronary intervention (PCI), as the preferred coronary reperfusion strategy, as soon as possible but within 120 minutes of the time when fibrinolysis could have been given.

Rationale

Primary PCI is a form of reperfusion therapy which should be done as soon as possible. This is because heart muscle starts to be lost once a coronary artery is blocked and the sooner reperfusion therapy is delivered the better the outcome for the patient. If too much time elapses the benefits of primary PCI may be lost. Because of the difficulty in timely delivery, in some areas primary PCI is no longer the preferred coronary reperfusion strategy over fibrinolysis. However, when performed early, primary PCI is more effective. To ensure the best outcomes for adults with STEMI, the ambulance service and hospitals delivering primary PCI should work together to minimise delays in treatment.

Commissioner and provider actions

CCGs and NHS England should:

- collaborate with all levels of the healthcare system (GP, ambulance and hospital trusts), via cardiovascular disease strategic clinical networks, to ensure that adults with acute STEMI have access to a single care pathway for coronary reperfusion regardless of method of presentation, which is available 24 hours a day
- work together to ensure that interventional cardiology services are designed to ensure the fastest possible provision of primary PCI for patients with acute STEMI presenting within 12 hours of onset of symptoms
- be aware when commissioning primary PCI services for people with acute STEMI that outcomes are strongly related to how quickly primary PCI is delivered, and that they can be influenced by the number of procedures carried out by the primary PCI centre
- consider performance managing ambulance and hospital trusts against locally negotiated targets for the provision of primary PCI for adults with acute STEMI who present within 12 hours of onset of symptoms, using nationally available data (for example, the Myocardial Ischaemia National Audit Project [MINAP]).

Ambulance trusts, A&E teams and cardiac service providers should:

- establish transfer protocols for adults with acute STEMI, incorporating the various different methods of patient presentation, and ensure adherence by all healthcare professionals to enable primary PCI to be provided as soon as possible
- ensure that there are enough healthcare professionals with the training and skills to provide a service in which all adults with acute STEMI who present within 12 hours of onset of symptoms are offered primary PCI within 120 minutes of the time when fibrinolysis could have been given.

Estimated resource impact

- No significant cost impact is anticipated. Increasing the number of people who receive early reperfusion therapy will reduce the likelihood of death or future heart failure in these people by limiting the extent of heart muscle damage.
- There may be a small decrease in the number of people receiving fibrinolytic treatment as a result of more people receiving primary PCI. Although the cost impact of this is not likely to be significant, any reduction in fibrinolysis may lead to fewer adverse events and a reduction in associated costs.

Feedback

We welcome your feedback on using this resource, particularly if you have used it to support the commissioning process.

Please let us know how you have used it and how it was helpful by completing this [short questionnaire](#).

Changes after publication

October 2014: Minor maintenance

Disclaimer

This resource provides support for the local use of NICE quality standards. It does not constitute formal NICE guidance. Each resource should therefore be used in conjunction with the relevant NICE quality standard and current national guidance on commissioning.

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ISBN: 978-1-4731-0731-1