



# Impact on NHS workforce and resources

Resource impact

Published: 18 November 2020

Last updated: 3 June 2021

[www.nice.org.uk](http://www.nice.org.uk)

The [NICE guideline on acute coronary syndromes](#) was updated in November 2020. New and updated recommendations have been reviewed for their potential impact on the NHS workforce and resources.

The guideline covers the early and longer-term (rehabilitation) management of acute coronary syndromes. These include ST-segment elevation myocardial infarction (STEMI), non-ST-segment elevation myocardial infarction (NSTEMI) and unstable angina. The guideline aims to improve survival and quality of life for people who have a heart attack or unstable angina.

The recommendations in the guideline were developed before the COVID-19 pandemic.

## Recommendations likely to have an impact on resources

The recommendations most likely to have the greatest resource impact nationally (for England) are listed below.

- For people with acute STEMI who are having primary percutaneous coronary intervention (PCI), offer:
  - Prasugrel as part of dual antiplatelet therapy with aspirin, if they are not already taking an oral anticoagulant (use the maintenance dose in the [prasugrel summary of product characteristics](#); for people aged 75 and over, think about whether the person's risk of bleeding with prasugrel outweighs its effectiveness, in which case offer ticagrelor or clopidogrel as alternatives)
  - Clopidogrel, as part of dual antiplatelet therapy with aspirin, if they are already taking an oral anticoagulant. **(recommendation 1.1.11)**
- Offer complete revascularisation with PCI for people with acute STEMI and multivessel coronary artery disease without cardiogenic shock. Consider doing this during the index hospital admission. **(recommendation 1.1.16)**
- For people with unstable angina or NSTEMI who are having coronary angiography, offer:
  - prasugrel or ticagrelor, as part of dual antiplatelet therapy with aspirin, if they have no separate indication for ongoing oral anticoagulation (if using prasugrel, only give it once coronary anatomy has been defined and PCI is intended, and use the maintenance dose in the [prasugrel summary of product characteristics](#); for people aged 75 and over, think about whether the person's risk of bleeding with prasugrel outweighs its effectiveness)
  - clopidogrel, as part of dual antiplatelet therapy with aspirin, if they have a separate indication for ongoing oral anticoagulation. **(recommendation 1.2.17)**
- Offer ticagrelor, as part of dual antiplatelet therapy with aspirin, to people with unstable angina or NSTEMI when PCI is not indicated, unless they have a high bleeding risk. **(recommendation 1.2.20)**

## Context

Acute coronary syndromes due to ischaemic heart disease remain a significant cause of morbidity and mortality. In 2015, heart disease remained the leading cause of death in men and the second most common cause of death in women in England. Although many more people now survive than in the past, there remains considerable scope to reduce their future risk of death, angina, heart failure and further heart attack.

Variation in practice across the UK in the treatments offered for acute coronary syndromes, combined with evidence of novel ways of treating acute coronary syndromes and updates to existing treatments, indicated a need for new and updated recommendations. These will help to deliver best practice to the large number of people receiving treatment for acute coronary syndromes in the NHS.

Acute coronary services are commissioned by NHS England and integrated care systems / clinical commissioning groups. NHS England commissions adult specialist cardiac services, including services for complex cardiac rhythm management, complex interventional cardiology and primary PCI for STEMI. Integrated care systems / clinical commissioning groups commission other cardiological services, including PCI for people with NSTEMI. Providers are NHS hospital trusts.

## Resource impact

The estimated resource impact of implementing this guideline for England in the next 5 years is a net cost of around £1 million in year 1, rising to a net cost of around £5 million in year 5.

The total non-cash-releasing saving for providers is estimated to be around £1 million by year 5, which is driven by an increase in complete revascularisation by PCI during the initial admission, with a consequent reduction in the need for subsequent planned admissions for staged PCI.

The cash cost for primary care commissioners is estimated to be around £6.1 million by year 5. This is due to an increase in the use of prasugrel and ticagrelor, which have a higher cost than clopidogrel, as part of dual antiplatelet therapy for people with unstable angina or NSTEMI. The overall cash cost includes the benefit of a cash saving, resulting from an increase in the use of prasugrel and a decrease in use of ticagrelor for dual antiplatelet therapy in people with acute STEMI (**recommendation 1.1.11**).

The impact on drug spend and capacity per 100,000 population is shown in tables 1 and 2 below.

**Table 1 Impact on drug spend per 100,000 population**

<b>Recommendation 1.1.11 - People with STEMI and multivessel coronary artery disease who are suitable for percutaneous coronary intervention</b>	<b>Unit cost</b>	<b>Current practice</b>	<b>Year 1</b>	<b>Year 3</b>	<b>Year 5</b>
<b>% Split of patients</b>					
People receiving clopidogrel with aspirin	£25.35	45%	40%	30%	20%
People receiving prasugrel with aspirin	£104.80	7%	18%	39%	60%
People receiving ticagrelor with aspirin	£661.28	48%	42%	31%	20%
		100%	100%	100%	100%
<b>Number of patients</b>					
People receiving clopidogrel with aspirin	£25.35	18	16	13	10
People receiving prasugrel with aspirin	£104.80	3	6	13	20
People receiving ticagrelor with aspirin	£661.28	19	17	14	10
<b>Total patients</b>		<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>

<b>Reduction in costs £'000</b>			<b>-£1</b>	<b>-£3</b>	<b>-£4</b>
<b>Recommendation 1.2.17 &amp; 1.2.20 - People with unstable angina or NSTEMI</b>	<b>Unit cost</b>	<b>Current practice</b>	<b>Year 1</b>	<b>Year 3</b>	<b>Year 5</b>
<b>% Split of patients</b>					
People receiving clopidogrel with aspirin	£25.35	58%	49%	32%	15%
People receiving prasugrel with aspirin	£104.80	2%	7%	15%	24%
People receiving ticagrelor with aspirin	£661.28	40%	44%	53%	61%
		100%	100%	100%	100%
<b>Number of patients</b>					
People receiving clopidogrel with aspirin	£25.35	59	50	33	15
People receiving prasugrel with aspirin	£104.80	2	7	16	25
People receiving ticagrelor with aspirin	£661.28	41	45	54	62
<b>Total patients</b>		<b>102</b>	<b>102</b>	<b>102</b>	<b>102</b>
<b>Increase in costs £'000</b>			<b>£3</b>	<b>£9</b>	<b>£15</b>

<b>Overall impact - increase in drug spend per 100,000</b>			<b>£2</b>	<b>£7</b>	<b>£11</b>
--	--	--	-----------	-----------	------------

Table 2 Impact on capacity per 100,000 population

<b>Recommendation 1.1.16 - People with STEMI and multivessel coronary artery disease - secondary care Impact</b>	<b>Unit Cost</b>	<b>Current Practice</b>	<b>Year 1</b>	<b>Year 3</b>	<b>Year 5</b>
<b>% Split of patients</b>					
Multi vessel disease STEMI treated with complete revascularisation at the initial admission	£3,957.00	42%	40%	30%	66%
Multi vessel disease STEMI, where culprit vessel is treated at initial admission and a subsequent planned admission for complete revascularisation	£5,201.18	40%	18%	39%	25%
Multi vessel disease STEMI where only the culprit vessel is treated	£3,262.78	18%	42%	31%	9%
		100%	100%	100%	100%
<b>Number of patients</b>					
Multi vessel disease STEMI treated with complete revascularisation at the initial admission	£3,957.00	5	6	7	8

Multi vessel disease STEMI, where culprit vessel is treated at initial admission and a subsequent planned	£5,201.18	5	5	4	3
Multi vessel disease STEMI where only the culprit vessel is treated	£3,262.78	2	2	2	1
<b>Total patients</b>		<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>
<b>Capacity benefit £'000</b>			<b>£0</b>	<b>-£1</b>	<b>-£2</b>

## Support to put the recommendations into practice

### Support from NICE

- We have published [visual summaries of the recommendations on early management of STEMI, unstable angina/NSTEMI](#) and [cardiac rehabilitation and secondary prevention](#).
- [NICE's impact report on cardiovascular disease management](#) summarises the uptake and impact of NICE's guidance on acute coronary syndromes, focusing on recommendations on primary PCI and cardiac rehabilitation. It also includes sections on the effect of COVID-19 on managing acute coronary syndromes and how people are accessing cardiac rehabilitation during the pandemic.

### Support from outside NICE

- The [NHS Long Term Plan Implementation Framework: system support offer](#) outlines the support being offered by the national cardiovascular disease programme, and includes support for improving the quality of cardiac rehabilitation services and optimising heart attack pathways.
- The [Getting It Right First Time \(GIRFT\) workstream on cardiology](#) began in 2017 and, following GIRFT methodology, the clinical leads have collected data and visited NHS trusts. Their recommendations for improving pathways of care will be published and will support the implementation of this guideline.

## Cardiac rehabilitation

- The [NHS Long Term Plan](#) highlights cardiac rehabilitation as an intervention recommended by NICE, which can save lives, improve quality of life and reduce hospital readmissions. The plan sets out an aim that, by 2028, the proportion of eligible people accessing cardiac rehabilitation will be among the highest in Europe, with up to 85% accessing care.
- The [Future of Cardiology \(a paper produced by a British Cardiovascular Society Working Group\)](#) describes service developments in response to the COVID-19 pandemic. The paper suggests these should be adopted across the NHS in a new model of cardiovascular care. It highlights the rapid development of home-based cardiac rehabilitation programmes, which use social media, apps and wearable activity trackers.
- Examples of best practice are published on the [tools and resources page of the NICE guideline on acute coronary syndromes](#). Many of the published examples relate to cardiac rehabilitation and how this service can be delivered, including via a web-based approach.

## Audits

- The [British Heart Foundation's National Audit of Cardiac Rehabilitation](#) aims to monitor the delivery of high-quality, evidence-based cardiovascular rehabilitation programmes to benefit everyone who is eligible. Their 2020 annual report includes a chapter on modes of delivery before and during the COVID-19 pandemic.
- The [National Cardiac Audit Programme's Myocardial Ischaemia National Audit Project](#) (MINAP) collects data on the care provided to people who are admitted to hospital with acute coronary syndromes. The [National Audit of Percutaneous Coronary Interventions](#) (NAPCI) collects data on PCI. Both audits collect data that support recommendations in this guideline.

The guideline resource and implementation panel



The guideline resource and implementation panel reviews NICE guidelines that have a substantial impact on NHS resources. By 'substantial' we mean that:

- implementing a single guideline recommendation in England costs more than £1 million per year, or
- implementing the whole guideline in England costs more than £5 million per year.

Panel members are from NICE, NHS England and NHS Improvement, Health Education England and, if appropriate, Public Health England and Skills for Care. Topic experts are invited for discussions on specific topics..

The panel does not comment on or influence the guideline recommendations outside NICE's usual consultation processes and timelines.