NICE National Institute for Health and Care Excellence

Putting NICE guidance into practice

Resource impact report:
Acute coronary syndromes (NG185)

Published: November 2020

Summary

This report focuses on the recommendations from NICE's guideline on acute coronary syndromes that we estimate will have the greatest resource impact nationally (for England), and will need the most additional resources to implement or potentially generate the biggest savings. They are:

- offer prasugrel as part of dual antiplatelet therapy with aspirin to people with acute ST-elevation myocardial infarction (STEMI) intended for treatment with primary percutaneous coronary intervention (PCI) **(recommendation 1.1.11)**
- offer complete revascularisation with PCI for people with acute STEMI and multivessel coronary artery disease **(recommendation 1.1.16)**
- offer prasugrel or ticagrelor, as part of dual antiplatelet therapy with aspirin, to people with unstable angina and non-ST elevated myocardial infarction (NSTEMI) who are having coronary angiography **(recommendation 1.2.17)**
- Offer ticagrelor, as part of dual antiplatelet therapy with aspirin, to people with unstable angina and NSTEMI when PCI is not indicated, unless they have a high bleeding risk **(recommendation 1.2.20).**

Financial impact

The estimated financial impact of implementing this guideline for England in the next 5 years is a cost of around £1 million in year 1 rising to a cost of around £5 million in year 5 as set out in table 1 and figure 1.

The non-cash releasing saving for providers is estimated to be around £1 million by year 5, which is driven by an increase in complete revascularisations with PCI at initial admissions rather than at subsequent planned admissions.

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 as part of dual antiplatelet therapy in people with unstable angina and NSTEMI. The overall cash cost is net of 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.

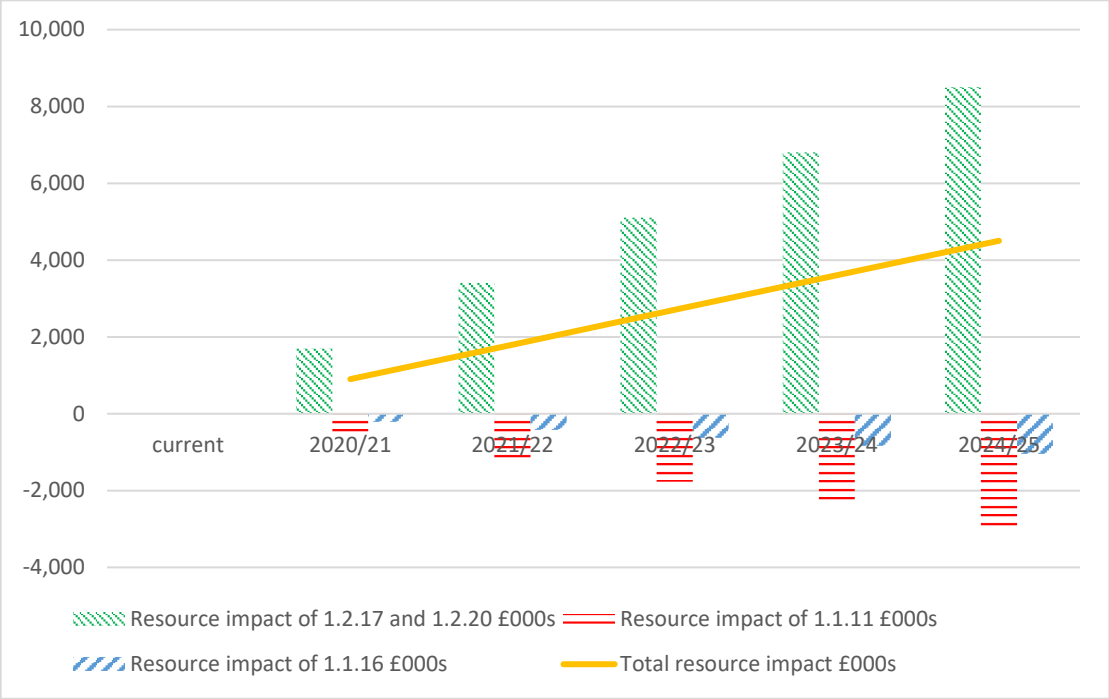
Table 1 Estimated cost of implementing the guideline for England

	2020/21	2021/22	2022/23	2023/24	2024/25
Implementation rate of guideline	20%	40%	60%	80%	100%
Estimated savings for recommendation 1.1.11 (£000) (cash savings) **(a)**	-485	-970	-1,455	-1,940	-2,425
Estimated savings for recommendation 1.1.16 (£000) (non-cash savings) **(b)**	-210	-419	-629	-838	-1,048
Estimated cost for recommendations 1.2.17 and 1.2.20 (£000) (cash cost) **(c)**	1,701	3,402	5,103	6,804	8,505
Total cash cost **(a+c)**	1,216	2,432	3,648	4,864	6,080
Total non-cash saving **(b)**	-210	-419	-629	-838	-1,048
Total resource impact for the population of England (£000)	**1,006**	**2,013**	**3,019**	**4,026**	**5,032**

Table 2 Estimated cost of implementing the guideline per 100,000 population

	2020/21	2021/22	2022/23	2023/24	2024/25
Implementation rate of guideline	20%	40%	60%	80%	100%
Total cash cost (£000)	2	4	7	9	11
Total non-cash saving (£000)	0	-1	-1	-2	-2
Total resource impact per 100,000 population (£000)	**2**	**4**	**5**	**7**	**9**

Figure 1 Resource impact of implementing the guideline (£000s)



Introduction

1.1 The guideline offers best practice advice on acute coronary syndromes.

1.2 This report discusses the resource impact of implementing our guideline on acute coronary syndromes in England. It aims to help organisations plan for the financial implications of implementing this NICE guideline.

1.3 A resource impact template accompanies this report to help with assessing the resource impact at a local level in England, Wales or Northern Ireland.

1.4 We have considered direct costs and savings to the NHS (and local authorities if applicable) and not those for the individual, the private sector or the not-for-profit sector. Any cost savings arising from a change in practice have been offset against the cost of implementing the change.

1.5 Acute coronary services are commissioned by NHS England and clinical commissioning groups. NHS England commission adult specialist cardiac services including complex cardiac rhythm management, complex interventional cardiology services and primary PCI for STEMI. Clinical commissioning groups commission other cardiological services including PCI for patients with stable angina and patients with NSTEMI. Providers are NHS hospital trusts.

2 Background

2.1 Acute coronary syndromes due to ischaemic heart disease remain a significant cause of morbidity and mortality. Although many more people now survive, there remains considerable scope to reduce their future risk of death, angina, heart failure and further heart attack.

2.2 The British cardiovascular intervention society audits show variation in practice across the UK in the treatments offered for acute coronary syndromes.

3 Recommendations with potential resource impact

There are 4 recommendations which are likely to lead to a significant resource impact when implemented. One recommendation each is considered in sections 3.1 and 3.2 while the other 2 are considered in section 3.3.

3.1 **For people with acute STEMI who are having primary 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 (summary of product characteristics)**
- **clopidogrel as part of dual antiplatelet therapy with aspirin if they are already taking an oral anticoagulant. (recommendation 1.1.11).**

Background

3.1.1 The use of dual antiplatelet therapy, (i.e. aspirin plus one of clopidogrel, prasugrel or ticagrelor) has become accepted practice, but there is no consensus regarding the best agent to combine with aspirin and currently there is variation in clinical practice nationally.

Assumptions made

3.1.2 Around 87,500 people are diagnosed with acute coronary syndromes (STEMI, unstable angina or NSTEMI) each year. Of these people around 25% (22,200) have STEMI and are suitable for primary percutaneous coronary intervention (PCI), this is based on audit information from the British Cardiovascular Intervention Society (BCIS).

3.1.3 In current practice around 45% of people (10,100) receive clopidogrel with aspirin, around 7% (1,600) receive prasugrel with aspirin and around 48% of people (10,600) receive ticagrelor with aspirin (2017/18 BCIS database).

3.1.4 Expert clinical opinion is that future uptake of prasugrel is uncertain but that it is expected to be in the range of 40% to 60% of the estimated population. In the template we have assumed uptake of prasugrel to be 50%.

3.1.5 It is therefore estimated in the template that 25% of people (5,600) will receive clopidogrel with aspirin, 50% (11,100) will receive prasugrel with aspirin and 25% (5,600) will receive ticagrelor with aspirin. The potential range of future uptake of prasugrel is shown in table 3.

Table 3 Range of future uptake of dual antiplatelet therapy for people with STEMI who are having PCI

Population	40% Prasugrel		50% Prasugrel		60% Prasugrel	
	%	Number	%	Number	%	Number
Current practice						
Clopidogrel with aspirin	45.3	10,068	45.3	10,068	45.3	10,068
Prasugrel with aspirin	7.2	1,600	7.2	1,600	7.2	1,600
Ticagrelor with aspirin	47.5	10,557	47.5	10,557	47.5	10,557
Total current practice	**100**	**22,226**	**100**	**22,226**	**100**	**22,226**
Future practice						
Clopidogrel with aspirin	30	6,668	25	5,557	20	4,445
Prasugrel with aspirin	40	8,891	50	11,113	60	13,336
Ticagrelor with aspirin	30	6,668	25	5,557	20	4,445
Total future practice	**100**	**22,226**	**100**	**22,226**	**100**	**22,226**
-	-	-	-	-	-	-
Resource impact (£000s)		**-1,895**		**-2,425**		**-2,955**

3.1.6 In both current and future practice, it is assumed that treatment will be initiated in secondary care, 1 pack (a month's supply) of medication will be prescribed from secondary care and the

remainder will be prescribed in primary care. VAT of 20% is applied to the cost of medication that is prescribed in secondary care.

3.1.7 People receiving dual antiplatelet therapy will also receive 75mg aspirin daily.

3.1.8 It is assumed that people receiving clopidogrel will receive a loading dose of 600mg.

3.1.9 It is assumed that people receiving clopidogrel will receive 75mg daily.

3.1.10 It is assumed that people receiving prasugrel will receive a loading dose of 60mg.

- People who are under 75 years old will receive 10mg of prasugrel daily.
- People who are over 75 years old or who weigh less than 60kg will receive 5mg of prasugrel daily.

3.1.11 Expert clinical opinion is that 15% of people who are receiving clopidogrel or prasugrel will be over 75 years old or will weigh less than 60kg.

3.1.12 It is assumed that people who are receiving ticagrelor will have a loading dose of 180mg, followed by 90mg of ticagrelor twice daily.

3.1.13 Expert clinical opinion is that people will be treated with dual antiplatelet therapy for 12 months.

Costs

3.1.14 The costs of the treatment options are summarised in appendix B.

Resource impact

3.1.15 The resource impact of implementing recommendation 1.1.11 is summarised in table 4.

Table 4 Estimated annual cost of recommendation 1.1.11 and number of people affected

	Current practice	2019/20	2020/21	2021/22	2022/23	2023/24
Implementation rate		20%	40%	60%	80%	100%
Activity						
People with acute STEMI who are treated with clopidogrel with aspirin for 12 months	10,068	9,166	8,264	7,361	6,459	5,557
People with acute STEMI who are treated with prasugrel with aspirin for 12 months	1,600	3,503	5,405	7,308	9,211	11,113
People with acute STEMI who are treated with ticagrelor with aspirin for 12 months	10,557	9,557	8,557	7,557	6,557	5,557
Total activity	**22,226**	**22,226**	**22,226**	**22,226**	**22,226**	**22,226**
Cost						
People with acute STEMI who are treated with clopidogrel with aspirin for 12 months (£000)	257	234	211	188	165	142
People with acute STEMI who are treated with prasugrel with aspirin for 12 months (£000)	168	367	566	766	965	1,165
People with acute STEMI who are treated with ticagrelor with aspirin for 12 months (£000)	6,981	6,320	5,659	4,997	4,336	3,674
Total cost (£000)	**7,406**	**6,921**	**6,436**	**5,951**	**5,466**	**4,981**
Total resource impact (saving) for population of England (£000)		**-485**	**-970**	**-1,455**	**-1,940**	**-2,425**

3.1.16 Prasugrel costs more than clopidogrel but considerably less than ticagrelor. Nationally the overall effect of this recommendation will be a saving to the NHS. However, this recommendation will need to be assessed locally as the resource impact may vary depending on what is currently prescribed locally.

Benefits and savings

3.1.17 The committee agreed that the evidence showed that prasugrel was more clinically effective than the other 2 treatment options in people with acute STEMI.

3.2 **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).**

Background

3.2.1 The committee found that evidence showed that complete revascularisation with multivessel PCI reduced mortality, myocardial infarction and repeat revascularisation at 1 year, compared with culprit vessel only PCI for people with acute STEMI. It was also associated with lower overall costs.

3.2.2 Expert clinical opinion is that there is uncertainty around future activity of revascularisation with PCI for people with acute STEMI and multivessel coronary artery disease. Because of this uncertainty, 2 scenarios have been modelled varying the timing of complete revascularisations in future practice. The scenarios vary between people receiving a complete revascularisation at the initial hospital admission and people returning for a complete revascularisation at a subsequent planned admission.

Assumptions made

3.2.3 According to the BCIS 2017/18 report, around 32% of people with STEMI (7,100) have multivessel coronary artery disease.

3.2.4 The BCIS 2017/18 report also details that currently, 42% (3,000) of people have multivessel coronary disease that is treated at the initial admission with complete revascularisation by PCI, 40% (2,800) have a culprit vessel treated at initial admission and a

subsequent planned admission to treat the multivessel disease and 18% (1,300) have only the culprit vessel treated with PCI.

3.2.5 The Complete trial Mehta et al, 2019 estimates that 2.8% (80) of people having a complete revascularisation, whether this is at an initial admission or a subsequent planned admission, would need to have an unplanned repeat revascularisation within a year. It also estimates that 7.9% (100) of people being treated for the culprit vessel only, would need to have an unplanned repeat revascularisation. These rates have been applied in the template.

Scenarios

3.2.6 The intention of the recommendation is that more people with multi vessel disease will have a complete revascularisation at their initial admission and the number of unplanned repeat revascularisations will reduce as a result. However, there is uncertainty over how many more people will have a complete revascularisation at their initial admission in future practice.

3.2.7 Where people have a subsequent admission for a planned revascularisation there is additional cost for the second admission, compared to a complete revascularisation at the initial admission. The number of unplanned repeat revascularisation is still reduced compared to people who have the culprit vessel only treated.

3.2.8 Because of this uncertainty around future practice, 2 scenarios have been modelled:

- scenario 1 – modelled for future practice in the resource impact template: 66% (4,700) of people have multivessel coronary disease that is treated at the initial admission with complete revascularisation with PCI, 25% (1,800) have a culprit vessel treated at initial admission and a subsequent planned admission

to treat the multivessel disease with PCI and 9% (650) have only the culprit vessel treated with PCI.

- scenario 2 – 51% (3,600) of people have multivessel coronary disease that is treated at the initial admission with complete revascularisation with PCI, 40% (2,800) have a culprit vessel treated at initial admission and a subsequent planned admission to treat the multivessel disease with PCI and 9% (650) have only the culprit vessel treated with PCI.

3.2.9 The 2 scenarios and their respective potential resource impacts are summarised in table 5.

Table 5 Activity and resource impact of the 2 scenarios for implementing recommendation 1.1.16.

Population	**Scenario 1**		**Scenario 2**	
	%	**Number**	**%**	**Number**
Current practice				
People having culprit and complete revascularisation at the initial admission	42	3,000	42	3,000
People having a culprit vessel treated at the initial admission and then returning for a subsequent planned admission	40	2,800	40	2,800
People having only a culprit vessel treated	18	1,300	18	1,300
Total current practice	**100**	**7,100**	**100**	**7,100**
Future practice				
People having culprit and complete revascularisation at the initial admission	66	4,700	51	3,700
People having a culprit vessel treated at the initial admission and then returning for a subsequent planned admission	25	1,800	40	2,800
People having only the culprit vessel treated	9	650	9	650
Total future practice		**7,100**		**7,100**
-	-	-	-	-
Resource impact (£000s)		**-1,048**		**280**

Costs

3.2.10 The costs of the various treatment options are summarised in appendix B.

3.2.11 The resource impact of offering complete revascularisation with PCI for people with acute STEMI and multivessel coronary artery disease is shown in table 6.

Table 6 Resource impact of the different scenarios for complete revascularisation with PCI for people with acute STEMI

	Current practice	2020/21	2021/22	2022/23	2023/24	2024/25
Scenario 1 – future practice 66% complete revascularisation at initial admission, 25% complete revascularisation at planned subsequent admission and 9% only a culprit vessel treated						
Total cost of treating multi vessel disease **(£000)**	32,575	32,369	32,164	31,958	31,753	31,547
Saving of treating multi vessel disease in England **(£000)**		-210	-419	-629	-838	-1,048
Scenario 2 – future practice 51% complete revascularisation at initial admission, 40% complete revascularisation at planned subsequent admission and 9% have only a culprit vessel treated						
Cost of treating multi vessel disease **(£000)**	32,575	32,635	32,695	32,755	32,815	32,875
Cost of treating multi vessel disease in England **(£000)**		56	112	168	224	280

3.2.12 Providers may need to review allocation of catheter laboratory time because according to expert clinical opinion a complete revascularisation takes a considerably longer time to complete (around 2 hours) than treating the culprit vessel only (around 1 hour). Clinical experts also suggest that complete revascularisation at the initial admission would not necessarily be a single procedure, but could take place as 2 separate procedures, within the same admission.

Benefits and savings

3.2.13 Treating people who have an acute STEMI and multivessel coronary artery disease with a complete revascularisation with PCI at their initial admission reduces costs for downstream revascularisation, although the initial procedure is more costly than treating the culprit vessel only.

3.2.14 Treating multivessel disease as well as the culprit vessel will reduce the need for future treatment. It is expected that there will be savings from reduced mortality, myocardial infarction and repeat revascularisation at year 1.

3.2.15 People having a multivessel intervention at their initial admission rather than being admitted twice are also less likely to experience anxiety and to benefit from being able to start cardiac rehabilitation sooner.

3.3 **For people with unstable angina and NSTEMI who are having coronary angiography (recommendation 1.2.17), 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 summary of product characteristics)
- clopidogrel, as part of dual antiplatelet therapy with aspirin, if they have a separate indication for ongoing oral anticoagulation

Offer ticagrelor, as part of dual antiplatelet therapy with aspirin, to people with unstable angina and NSTEMI when PCI is not indicated, unless they have a high bleeding risk (recommendation 1.2.20).

Background

3.3.1 The use of dual antiplatelet therapy, (i.e. aspirin plus one of clopidogrel, prasugrel or ticagrelor) has become accepted practice, but there has been no consensus regarding the best agent to combine with aspirin.

Assumptions made

3.3.2 According to Myocardial ischaemia national audit project (MINAP) 2019 summary report around 65% of people (56,900) with acute coronary syndromes are expected to have unstable angina and NSTEMI per year in England.

3.3.3 Current practice is based on the BCIS audit of activity 2017/18 and applied to the unstable angina and NSTEMI population. Current practice is that around 58% (32,800) of people receive clopidogrel with aspirin, 2% (1,300) receive prasugrel with aspirin and 40% (22,900) receive ticagrelor with aspirin.

3.3.4 Based on expert clinical opinion, in future practice 15% (8,500) of people are expected to receive clopidogrel with aspirin, 24% (13,700) will receive prasugrel with aspirin and 61% (34,700) will receive ticagrelor with aspirin.

3.3.5 In both current and future practice, it is assumed that treatment will be initiated in secondary care, 1 pack (a month's supply) of medication will be prescribed from secondary care and the remainder will be prescribed in primary care. VAT of 20% is applied to the cost of medication that is prescribed in secondary care.

3.3.6 People receiving dual antiplatelet therapy will also receive 75mg of aspirin daily.

3.3.7 It is assumed that people receiving clopidogrel will receive a loading dose of 600mg continued with 75mg once daily.

3.3.8 It is assumed that people receiving prasugrel will receive a loading dose of 60mg.

- People who are under 75 years old will receive 10mg of prasugrel daily.
- People who are over 75 years old or who weigh less than 60kg will receive 5mg of prasugrel daily.

3.3.9 Expert clinical opinion is that 15% of people who are receiving prasugrel will be over 75 years or will weigh less than 60kg.

3.3.10 It is assumed that people who are receiving ticagrelor will have a loading dose of 180mg, followed by 90mg of ticagrelor twice daily.

3.3.11 Expert clinical opinion is that people will be treated with dual antiplatelet therapy for 12 months.

3.3.12 Current and future practice for people who receive dual antiplatelet therapy is shown in table 7.

Table 7 Current and future practice for people who have unstable angina and NSTEMI and receive dual antiplatelet therapy

Population	**Current practice**		**Future practice**	
	%	**Number**	**%**	**Number**
People receiving clopidogrel with aspirin for 12 months	57.6	32,762	15	8,532
People receiving prasugrel with aspirin for 12 months	2.2	1,251	24	13,650
People receiving ticagrelor with aspirin for 12 months	40.2	22,865	61	34,696
Total	**100**	**56,878**	**100**	**56,878**

Costs

3.3.13 The costs of treating people with unstable angina and NSTEMI are summarised in appendix B.

3.3.14 The net cost of treatment for people with unstable angina and NSTEMI is summarised in table 8.

Table 8 Estimated annual cost of recommendations 1.2.17 and 1.2.20 and the number of people affected

	Current practice	2019/20	2020/21	2021/22	2022/23	2023/24
Implementation rate		20%	40%	60%	80%	100%
Activity						
People with unstable angina or NSTEMI - clopidogrel with aspirin for 12 months	32,762	27,916	23,070	18,224	13,378	8,532
People with unstable angina or NSTEMI - prasugrel with aspirin for 12 months	1,251	3,731	6,211	8,691	11,171	13,651
People with unstable angina or NSTEMI - ticagrelor with aspirin for 12 months	22,865	25,231	27,597	29,963	32,330	34,696
Total activity	**56,878**	**56,878**	**56,878**	**56,878**	**56,878**	**56,878**
Cost						
People with unstable angina or NSTEMI - clopidogrel with aspirin for 12 months (£000)	835	712	588	465	341	218
People with unstable angina or NSTEMI - prasugrel with aspirin for 12 months (£000)	131	391	651	911	1,171	1,431
People with unstable angina or NSTEMI - ticagrelor with aspirin for 12 months (£000)	15,120	16,685	18,250	19,814	21,379	22,944
Total cost (£000s)	**16,087**	**17,788**	**19,489**	**21,190**	**22,891**	**24,592**
Total resource impact (cost) for population of England (£000)		**1,701**	**3,402**	**5,103**	**6,804**	**8,505**

3.3.15 There is a significant resource impact for people who change from receiving low cost treatment with clopidogrel (around £26 per annum) to receiving higher cost treatment with prasugrel or ticagrelor (around £105 and £661 per annum, respectively).

Benefits and savings

3.3.16 The committee found treatment, as a part of dual antiplatelet therapy, with prasugrel or ticagrelor with aspirin to be more clinically effective than with clopidogrel with aspirin.

4 Resource impact over time

4.1 The estimated annual cost of implementing this guideline for the population of England based on the uptake in the resource impact assumptions is shown in table 9. The cost from year 5 once steady state is reached is equivalent to around £9,000 per 100,000 population.

4.2 The scenario used to estimate the resource impact of recommendation 1.1.16 has a saving of around £1 million for the population of England. This is subject to uncertainty and could vary depending on actual current and future practice.

Table 9 Resource impact of implementing the guideline using NICE assumptions

	2020/21	2021/22	2022/23	2023/24	2024/25
Implementation rate of guideline	20%	40%	60%	80%	100%
Estimated savings for recommendation 1.1.11 (£000) (cash savings) (a)	-485	-970	-1,455	-1,940	-2,425
Estimated savings for recommendation 1.1.16 (£000) (non-cash savings) (b)	-210	-419	-629	-838	-1,048
Estimated cost for recommendations 1.2.17 and 1.2.20 (£000) (cash cost) (c)	1,701	3,402	5,103	6,804	8,505
Total cash cost (a+c)	**1,216**	**2,432**	**3,648**	**4,864**	**6,080**
Total non-cash saving (b)	**-210**	**-419**	**-629**	**-838**	**-1,048**
Total resource impact for the population of England (£000)	**1,006**	**2,013**	**3,019**	**4,026**	**5,032**

Table 10 Estimated budget impact of implementing the guideline per 100,000 population

	2020/21	2021/22	2022/23	2023/24	2024/25
Implementation rate of guideline	20%	40%	60%	80%	100%
Total cash saving (£000)	2	4	7	9	11
Total non-cash saving (£000)	0	-1	-1	-1	-2
Total resource impact per 100,000 population (£000)	**2**	**4**	**5**	**7**	**9**

5 Implications for commissioners and providers

5.1 Acute coronary syndromes fall under programme budgeting category 10A Coronary Heart Disease.

5.2 There is likely to be an increase in cost for drugs relating to the treatment of people with unstable angina or NSTEMI.

5.3 There may be a small saving (scenario 1) or a small cost (scenario 2) from the recommendation to offer complete revascularisation for people with multi vessel disease. The health economic evidence that supports the guideline suggests that complete revascularisation for people with multi vessel disease is cost saving.

6 Assumptions made

6.1 The resource impact template makes the following assumptions:

- There are around 87,500 people in England who are diagnosed with acute coronary syndromes each year based on Myocardial ischaemia national audit project (MINAP) 2019 summary report.

6.2 If a national tariff price or indicative price exists for an activity, this has been used as the unit cost. The resource impact template can be used to amend unit costs to account for any local market forces factor.

6.3 Using these prices ensures that the costs in the report are the cost to the clinical commissioning group of commissioning predicted changes in activity at the tariff price but may not represent the actual cost to individual trusts of delivering the activity.

7 Other considerations

7.1 The patent for ticagrelor is due to run out in December 2024. It is expected that generic equivalents may become available after this

time at lower costs. It is not known what the cost would be for the alternatives and this has not been included in the model.

8 Sensitivity analysis

8.1 There are some assumptions in the model for which no empirical evidence exists, so we cannot be as certain about them. Appropriate minimum and maximum values of variables were used in the sensitivity analysis to assess which variables have the biggest impact on the net cost or saving. This enables users to identify the significant cost drivers.

Appendix A is a table listing all variables modified. The key conclusions are discussed below.

8.2 Varying the number of people with STEMI receiving prasugrel in future practice from 40% to 60% and people receiving clopidogrel and ticagrelor between 30% to 20% each leads to an estimated cost of between £5.6 million and £4.5 million for the population of England.

8.3 Varying the number of people with NSTEMI receiving prasugrel from 14% to 34% and people receiving ticagrelor between 71% to 51% leads to an estimated cost of between £8.2 million and £1.9 million for the population of England.

Appendix A. Results of sensitivity analysis

Individual variable sensitivity

				Recurrent resource impact				
	Baseline value	**Minimum value**	**Maximum value**	**Baseline resource impact (£000s)**	**Minimum resource impact (£000s)**	**Maximum resource impact (£000s)**	**Change (£000s)**	**Sensitivity ratio**
People with STEMI - receiving prasugrel with aspirin changing ticagrelor	50%	40%	60%	5,032	5,563	4,502	-1,061	0.35
People with Unstable Angina / NSTEMI - receiving prasugrel with aspirin changing ticagrelor	24%	14%	34%	5,032	8,198	1,867	-6,331	1.00

Appendix B. Unit costs

Table 11 Cost of treatment options for people with acute STEMI, unstable angina and NSTEMI

Treatment	Duration	Reference	Cost (£)
People receiving clopidogrel, initiation dose of 600mg, followed by a daily dose of 75mg, with aspirin[1]	12 months	eMIT and Drug Tariff (March 2020)	25.50
People receiving prasugrel, initiation dose of 60mg, followed by 5mg for people less than 60kg or over 75 years old, 10mg for people more than 60kg or under 75 years old, with aspirin[1]	12 months	eMIT and Drug Tariff (March 2020)	104.80
People receiving ticagrelor, initiation dose of 180mg, followed by 90mg twice daily, with aspirin[1]	12 months	eMIT and Drug Tariff (March 2020)	661.28
1 All dual anti-platelet treatment is with a 75mg dose of aspirin			

Table 12 Cost of PCI treatment options

Treatment	Detail	Source	Costs (£)
Complete revascularisation at initial admission	Weighted average cost of complex percutaneous transluminal coronary angioplasty EY40A-D non-elective tariff, National tariff 2019/20 at the initial admission	National tariff 2019/20 weighted by Reference costs 2017/18	3,957
Unplanned repeat revascularisation	Weighted average cost of complex percutaneous transluminal coronary angioplasty EY40A-D non-elective tariff, National tariff 2019/20 at the initial admission	National tariff 2019/20 weighted by Reference costs 2017/18	3,957
Culprit vessel treatment at the initial admission, with a planned revascularisation	Weighted average cost of standard percutaneous transluminal coronary angioplasty EY41A-D non-elective tariff, National tariff 2019/20 initial admission followed by a planned admission	National tariff 2019/20 weighted by Reference costs 2017/18	5,201 (3,263 + 1,938)
Culprit vessel only at the initial admission	Weighted average cost of standard percutaneous transluminal coronary angioplasty EY41A-D non-elective tariff, National tariff 2019/20	National tariff 2019/20 weighted by Reference costs 2017/18	3,263

About this resource impact report

This resource impact report accompanies the NICE guideline on acute coronary syndromes and should be read in conjunction with it. See terms and conditions on the NICE website.