

Acute coronary syndromes

NICE guideline: search strategies

NICE guideline <number>

Search strategies

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Draft for Consultation

*This guideline was developed by the
National Guideline Centre*

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Appendix A: Antiplatelet therapy

Acute coronary syndromes search strategy- antiplatelets

This literature search strategy was used for the following reviews;

- Which antiplatelet is most clinically and cost effective for managing unstable angina or NSTEMI or for managing STEMI in adults?

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

A.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 1: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 16 June 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 16 June 2019	Exclusions Randomised controlled trials
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 6 of 12 CENTRAL to 2019 Issue 6 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

1.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
2.	Heart Arrest/
3.	(acute coronary adj2 syndrome*).ti,ab.
4.	((myocardial or heart) adj infarct*).ti,ab.
5.	(heart adj (attack* or event*)).ti,ab.
6.	((heart or cardiac) adj arrest*).ti,ab.
7.	(coronary adj2 thrombos*).ti,ab.
8.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.

9.	"non-ST-segment elevation".ti,ab.
10.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
11.	"Q wave myocardial infarction".ti,ab.
12.	"non Q wave MI".ti,ab.
13.	NSTE-ACS.ti,ab.
14.	(subendocardial adj3 infarct*).ti,ab.
15.	((unstable or variant) adj2 angina*).ti,ab.
16.	(unstable adj2 coronary).ti,ab.
17.	or/1-16
18.	letter/
19.	editorial/
20.	news/
21.	exp historical article/
22.	Anecdotes as Topic/
23.	comment/
24.	case report/
25.	(letter or comment*).ti.
26.	or/18-25
27.	randomized controlled trial/ or random*.ti,ab.
28.	26 not 27
29.	animals/ not humans/
30.	exp Animals, Laboratory/
31.	exp Animal Experimentation/
32.	exp Models, Animal/
33.	exp Rodentia/
34.	(rat or rats or mouse or mice).ti.
35.	or/28-34
36.	17 not 35
37.	limit 36 to English language
38.	(clopidogrel or plavix or grepid).ti,ab.
39.	(ticagrelor or brilinta or brilique or possia).ti,ab.
40.	Prasugrel Hydrochloride/
41.	(prasugrel or efient or effient or prasita).ti,ab.
42.	p2y12 inhibitors.ti,ab.
43.	*Platelet Aggregation Inhibitors/
44.	(antiplatelet* adj2 (dual or therap* or treat* or combi*)).ti,ab.
45.	DAPT.ti,ab.
46.	or/38-45
47.	37 and 46
48.	randomized controlled trial.pt.
49.	controlled clinical trial.pt.
50.	randomi#ed.ti,ab.
51.	placebo.ab.
52.	randomly.ti,ab.
53.	Clinical Trials as topic.sh.

54.	trial.ti.
55.	or/48-54
56.	Meta-Analysis/
57.	exp Meta-Analysis as Topic/
58.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
59.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
60.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
61.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
62.	(search* adj4 literature).ab.
63.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
64.	cochrane.jw.
65.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
66.	or/56-65
67.	47 and (55 or 66)
68.	ASPIRIN/
69.	(aspirin or caprin or disprin or aspro or acetylsalicylic acid or 2-acetoxybenzoic acid or acetylsalicylate or solprin).ti,ab.
70.	or/68-69
71.	Factor Xa Inhibitors/
72.	(factor Xa inhibitors or apixaban or eliquis or rivaroxaban or xarelto or edoxaban or lixiana or dabigatran or pradaxa or warfarin or coumadin).ti,ab.
73.	rivaroxaban/
74.	DABIGATRAN/
75.	warfarin/
76.	or/71-75
77.	70 and 76
78.	37 and 77 and (55 or 66)
79.	67 or 78

Embase (Ovid) search terms

1.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
2.	heart arrest/
3.	(acute coronary adj2 syndrome*).ti,ab.
4.	((myocardial or heart) adj infarct*).ti,ab.
5.	(heart adj (attack* or event*)).ti,ab.
6.	((heart or cardiac) adj arrest*).ti,ab.
7.	(coronary adj2 thrombos*).ti,ab.
8.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
9.	"non-ST-segment elevation".ti,ab.
10.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
11.	"Q wave myocardial infarction".ti,ab.
12.	"non Q wave MI".ti,ab.
13.	NSTE-ACS.ti,ab.

14.	(subendocardial adj3 infarct*).ti,ab.
15.	((unstable or variant) adj2 angina*).ti,ab.
16.	(unstable adj2 coronary).ti,ab.
17.	or/1-16
18.	letter.pt. or letter/
19.	note.pt.
20.	editorial.pt.
21.	Case report/ or Case study/
22.	(letter or comment*).ti.
23.	or/18-22
24.	randomized controlled trial/ or random*.ti,ab.
25.	23 not 24
26.	animal/ not human/
27.	Nonhuman/
28.	exp Animal Experiment/
29.	exp Experimental animal/
30.	Animal model/
31.	exp Rodent/
32.	(rat or rats or mouse or mice).ti.
33.	or/25-32
34.	17 not 33
35.	limit 34 to English language
36.	(clopidogrel or plavix or grepid).ti,ab.
37.	clopidogrel/
38.	(ticagrelor or brilinta or briliq or possia).ti,ab.
39.	ticagrelor/
40.	(prasugrel or efient or effient or prasita).ti,ab.
41.	prasugrel/
42.	p2y12 inhibitors.ti,ab.
43.	*antithrombocytic agent/
44.	(antiplatelet* adj2 (dual or therap* or treat* or combi*)).ti,ab.
45.	DAPT.ti,ab.
46.	or/36-45
47.	35 and 46
48.	random*.ti,ab.
49.	factorial*.ti,ab.
50.	(crossover* or cross over*).ti,ab.
51.	((doubl* or singl*) adj blind*).ti,ab.
52.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
53.	crossover procedure/
54.	single blind procedure/
55.	randomized controlled trial/
56.	double blind procedure/
57.	or/48-56
58.	systematic review/

59.	meta-analysis/
60.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
61.	((systematic or evidence) adj3 (review* or overview*)).ti,ab.
62.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
63.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
64.	(search* adj4 literature).ab.
65.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
66.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
67.	cochrane.jw.
68.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
69.	or/58-67
70.	47 and (57 or 69)
71.	acetylsalicylic acid/
72.	(aspirin or caprin or disprin or aspro or acetylsalicylic acid or 2-acetoxybenzoic acid or acetylsalicylate or solprin).ti,ab.
73.	71 or 72
74.	blood clotting factor 10a inhibitor/
75.	(factor Xa inhibitors or apixaban or eliquis or rivaroxaban or xarelto or edoxaban or lixiana or dabigatran or pradaxa or warfarin or coumadin).ti,ab.
76.	apixaban/
77.	rivaroxaban/
78.	edoxaban/
79.	dabigatran/
80.	warfarin/
81.	or/74-80
82.	73 and 81
83.	35 and 82 and (57 or 69)
84.	70 or 83

Cochrane Library (Wiley) search terms

#1.	MeSH descriptor: [Acute Coronary Syndrome] this term only
#2.	MeSH descriptor: [Angina Pectoris] this term only
#3.	MeSH descriptor: [Angina, Unstable] this term only
#4.	MeSH descriptor: [Coronary Thrombosis] this term only
#5.	MeSH descriptor: [Myocardial Infarction] explode all trees
#6.	(or #1-#5)
#7.	MeSH descriptor: [Heart Arrest] this term only
#8.	(acute coronary near/2 syndrome*).ti,ab
#9.	((myocardial or heart) next infarct*).ti,ab
#10.	(heart next (attack* or event*)).ti,ab
#11.	((heart or cardiac) next arrest*).ti,ab
#12.	(coronary near/2 thrombos*).ti,ab
#13.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab
#14.	non-ST-segment elevation:ti,ab

#15.	(non-STEMI or NSTEMI or nonSTEMI):ti,ab
#16.	Q wave myocardial infarction:ti,ab
#17.	non Q wave MI:ti,ab
#18.	NSTE-ACS:ti,ab
#19.	(subendocardial near/3 infarct*):ti,ab
#20.	((unstable or variant) near/2 angina*):ti,ab
#21.	(unstable near/2 coronary):ti,ab
#22.	(or #6-#21)
#23.	(clopidogrel or plavix or grepid):ti,ab
#24.	(ticagrelor or brilinta or briliq or possia):ti,ab
#25.	MeSH descriptor: [Prasugrel Hydrochloride] this term only
#26.	(prasugrel or efient or effient or prasita):ti,ab
#27.	p2y12 inhibitors:ti,ab
#28.	MeSH descriptor: [Platelet Aggregation Inhibitors] this term only
#29.	(antiplatelet* near/2 (dual or therap* or treat* or combi*)):ti,ab
#30.	DAPT:ti,ab
#31.	(or #23-#30)
#32.	#22 and #31
#33.	MeSH descriptor: [Aspirin] this term only
#34.	(aspirin or caprin or disprin or aspro or acetylsalicylic acid or 2-acetoxybenzoic acid or acetylsalicylate or solprin):ti,ab
#35.	(or #33-#34)
#36.	MeSH descriptor: [Factor Xa Inhibitors] this term only
#37.	(factor Xa inhibitors or apixaban or eliquis or rivaroxaban or xarelto or edoxaban or lixiana or dabigatran or pradaxa or warfarin or coumadin):ti,ab
#38.	MeSH descriptor: [Rivaroxaban] this term only
#39.	MeSH descriptor: [Dabigatran] this term only
#40.	MeSH descriptor: [Warfarin] this term only
#41.	(or #36-#40)
#42.	#35 and #41
#43.	#32 or #42

A.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a search relating to acute coronary syndromes population combined with terms for interventions in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase using a filter for health economics studies.

Table 2: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Embase	01 January 2014 – 18 June 2019	Exclusions Health economics studies

Database	Dates searched	Search filter used
Centre for Research and Dissemination (CRD)	HTA - 2003 – 31 March 2018 NHSEED - 2003 to 31 March 2015	None

Medline (Ovid) search terms

1.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
2.	Heart Arrest/
3.	(acute coronary adj2 syndrome*).ti,ab.
4.	((myocardial or heart) adj infarct*).ti,ab.
5.	(heart adj (attack* or event*)).ti,ab.
6.	((heart or cardiac) adj arrest*).ti,ab.
7.	(coronary adj2 thrombos*).ti,ab.
8.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
9.	"non-ST-segment elevation".ti,ab.
10.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
11.	"Q wave myocardial infarction".ti,ab.
12.	"non Q wave MI".ti,ab.
13.	NSTE-ACS.ti,ab.
14.	(subendocardial adj3 infarct*).ti,ab.
15.	((unstable or variant) adj2 angina*).ti,ab.
16.	(unstable adj2 coronary).ti,ab.
17.	or/1-16
18.	letter/
19.	editorial/
20.	news/
21.	exp historical article/
22.	Anecdotes as Topic/
23.	comment/
24.	case report/
25.	(letter or comment*).ti.
26.	or/18-25
27.	randomized controlled trial/ or random*.ti,ab.
28.	26 not 27
29.	animals/ not humans/
30.	exp Animals, Laboratory/
31.	exp Animal Experimentation/
32.	exp Models, Animal/
33.	exp Rodentia/
34.	(rat or rats or mouse or mice).ti.

35.	or/28-34
36.	17 not 35
37.	limit 36 to English language
38.	Economics/
39.	Value of life/
40.	exp "Costs and Cost Analysis"/
41.	exp Economics, Hospital/
42.	exp Economics, Medical/
43.	Economics, Nursing/
44.	Economics, Pharmaceutical/
45.	exp "Fees and Charges"/
46.	exp Budgets/
47.	budget*.ti,ab.
48.	cost*.ti.
49.	(economic* or pharmaco?economic*).ti.
50.	(price* or pricing*).ti,ab.
51.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
52.	(financ* or fee or fees).ti,ab.
53.	(value adj2 (money or monetary)).ti,ab.
54.	or/38-53
55.	37 and 54
56.	*Angiography/
57.	Angiocardiography/
58.	Coronary Angiography/
59.	Angiograph*.ti.
60.	Arteriograph*.ti.
61.	Angiocardiograph*.ti,ab.
62.	Coronary Angiograph*.ti,ab.
63.	Angiogram*.ti,ab.
64.	Cardioangiograph*.ti,ab.
65.	Angiocardiogram.ti,ab.
66.	Angio Cardiograph*.ti,ab.
67.	Coronary Arteriogra*.ti,ab.
68.	Coronarograph*.ti,ab.
69.	*Myocardial Revascularization/
70.	Angioplasty, Balloon, Coronary/
71.	(Myocardial adj revasculari?ation).ti,ab.
72.	PCI.ti,ab.
73.	Percutaneous coronary intervention.ti,ab.
74.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
75.	PTCA.ti,ab.
76.	exp Angioplasty/
77.	Blunt microdissection.ti,ab.

78.	((laser or patch) adj angioplasty).ti,ab.
79.	Percutaneous Transluminal Angioplasty.ti,ab.
80.	Transluminal Coronary Angioplasty.ti,ab.
81.	(Balloon adj3 coronary).ti,ab.
82.	(Balloon adj3 angioplasty).ti,ab.
83.	exp STENTS/
84.	stent*.ti,ab.
85.	Or/56-84
86.	aspirin/
87.	(aspirin or acetylsalicylic acid).ti,ab.
88.	(clopidogrel or plavix).ti,ab.
89.	(ticagrelor or brilique).ti,ab.
90.	(prasugrel or efient or effient or prasita).ti,ab.
91.	Prasugrel Hydrochloride/
92.	platelet aggregation inhibitors/
93.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
94.	exp Platelet Glycoprotein GPIIb-IIIa Complex/
95.	exp Receptors, Fibrinogen/
96.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
97.	exp adrenergic beta-antagonists/
98.	(propranolol or angilol or inderal-la or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or loproresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
99.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or celiprolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/
100.	(beta adj3 block*).ti,ab.
101.	(b adj3 block*).ti,ab.
102.	(beta adj2 antagonist*).ti,ab.
103.	Antithrombins/
104.	Antithrombin*.ti,ab.
105.	(thrombin adj3 inhibitor*).ti,ab.
106.	Hirudins/
107.	Hirudin*.ti,ab.
108.	Hirulog.ti,ab.
109.	Bivalirudin.ti,ab.
110.	Or/86-109
111.	55 and (85 or 110)

Embase (Ovid) search terms

1.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
2.	heart arrest/

3.	(acute coronary adj2 syndrome*).ti,ab.
4.	((myocardial or heart) adj infarct*).ti,ab.
5.	(heart adj (attack* or event*)).ti,ab.
6.	((heart or cardiac) adj arrest*).ti,ab.
7.	(coronary adj2 thrombos*).ti,ab.
8.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
9.	"non-ST-segment elevation".ti,ab.
10.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
11.	"Q wave myocardial infarction".ti,ab.
12.	"non Q wave MI".ti,ab.
13.	NSTE-ACS.ti,ab.
14.	(subendocardial adj3 infarct*).ti,ab.
15.	((unstable or variant) adj2 angina*).ti,ab.
16.	(unstable adj2 coronary).ti,ab.
17.	or/1-16
18.	letter.pt. or letter/
19.	note.pt.
20.	editorial.pt.
21.	Case report/ or Case study/
22.	(letter or comment*).ti.
23.	or/18-22
24.	randomized controlled trial/ or random*.ti,ab.
25.	23 not 24
26.	animal/ not human/
27.	Nonhuman/
28.	exp Animal Experiment/
29.	exp Experimental animal/
30.	Animal model/
31.	exp Rodent/
32.	(rat or rats or mouse or mice).ti.
33.	or/25-32
34.	17 not 33
35.	limit 34 to English language
36.	health economics/
37.	exp economic evaluation/
38.	exp health care cost/
39.	exp fee/
40.	budget/
41.	funding/
42.	budget*.ti,ab.

43.	cost*.ti.
44.	(economic* or pharmaco?economic*).ti.
45.	(price* or pricing*).ti,ab.
46.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
47.	(financ* or fee or fees).ti,ab.
48.	(value adj2 (money or monetary)).ti,ab.
49.	or/36-48
50.	35 and 49
51.	angiography/
52.	angiocardiography/
53.	coronary angiography/
54.	Angiograph*.ti.
55.	Arteriograph*.ti.
56.	Angiocardiograph*.ti,ab.
57.	Coronary Angiograph*.ti,ab.
58.	Angiogram*.ti,ab.
59.	Cardioangiograph*.ti,ab.
60.	Angiocardiogram.ti,ab.
61.	Angio Cardiograph*.ti,ab.
62.	Coronary Arteriogra*.ti,ab.
63.	Coronarograph*.ti,ab.
64.	*heart muscle revascularization/
65.	transluminal coronary angioplasty/
66.	(Myocardial adj revasculari?ation).ti,ab.
67.	PCI.ti,ab.
68.	Percutaneous coronary intervention.ti,ab.
69.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
70.	PTCA.ti,ab.
71.	*angioplasty/
72.	Blunt microdissection.ti,ab.
73.	((laser or patch) adj angioplasty).ti,ab.
74.	Percutaneous Transluminal Angioplasty.ti,ab.
75.	Transluminal Coronary Angioplasty.ti,ab.
76.	(Balloon adj3 coronary).ti,ab.
77.	(Balloon adj3 angioplasty).ti,ab.
78.	exp STENTS/
79.	stent*.ti,ab.
80.	Or/51-79
81.	acetylsalicylic acid/
82.	(aspirin or acetylsalicylic acid).ti,ab.

83.	(clopidogrel or plavix).ti,ab.
84.	(ticagrelor or brilique).ti,ab.
85.	(prasugrel or efient or effient or prasita).ti,ab.
86.	prasugrel/
87.	antithrombocytic agent/
88.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphasIIb beta3 or GPIIB IIIA).ti,ab.
89.	exp fibrinogen receptor/
90.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
91.	abciximab/ or eptifibatide/ or tirofiban/
92.	exp beta adrenergic receptor blocking agent/
93.	(propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or loproresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
94.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or bisoprolol fumarate/ or carvedilol/ or celiprolol/ or esmolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/ or timolol maleate/
95.	(beta adj3 block*).ti,ab.
96.	(b adj3 block*).ti,ab.
97.	(beta adj2 antagonist*).ti,ab.
98.	antithrombin/
99.	Antithrombin*.ti,ab.
100.	(thrombin adj3 inhibitor*).ti,ab.
101.	hirudin derivative/
102.	Hirudin*.ti,ab.
103.	Hirulog.ti,ab.
104.	Bivalirudin.ti,ab.
105.	Or/81-104
106.	50 and (80 or 105)

NHS EED and HTA (CRD) search terms

#1.	MeSH DESCRIPTOR Acute Coronary Syndrome
#2.	(MeSH DESCRIPTOR angina pectoris)
#3.	(MeSH DESCRIPTOR Angina, Unstable)
#4.	(MeSH DESCRIPTOR Coronary Thrombosis)
#5.	MeSH DESCRIPTOR Myocardial Infarction EXPLODE ALL TREES
#6.	#1 OR #2 OR #3 OR #4 OR #5
#7.	(MeSH DESCRIPTOR Heart Arrest)
#8.	((acute coronary adj2 syndrome*))
#9.	((myocardial or heart) adj infarct*))
#10.	((heart adj (attack* or event*)))

#11.	((heart or cardiac) adj arrest*)
#12.	((coronary adj2 thrombos*))
#13.	((stemi or st-segment or st segment or st-elevation or st elevation))
#14.	("non-ST-segment elevation")
#15.	((non-STEMI or NSTEMI or nonSTEMI))
#16.	("Q wave myocardial infarction")
#17.	("non Q wave MI")
#18.	(NSTE-ACS)
#19.	(STE-ACS)
#20.	((subendocardial adj3 infarct*))
#21.	((unstable or variant) adj2 angina*))
#22.	((unstable adj2 coronary))
#23.	(#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22)
#24.	(MeSH DESCRIPTOR Angiography)
#25.	(MeSH DESCRIPTOR Angiocardiology)
#26.	((MeSH DESCRIPTOR Coronary Angiography))
#27.	((Angiograph*))
#28.	((Arteriograph*))
#29.	((Angiocardiology*))
#30.	((Coronary Angiograph*))
#31.	((Angiogram*))
#32.	((Cardioangiograph*))
#33.	((Angiocardiology))
#34.	((Angio Cardiograph*))
#35.	((Coronary Arteriogra*))
#36.	((Coronarograph*))
#37.	(MeSH DESCRIPTOR Myocardial Revascularization)
#38.	(MeSH DESCRIPTOR Angioplasty, Balloon, Coronary)
#39.	((Myocardial adj revasculari?ation))
#40.	((PCI))
#41.	((Percutaneous coronary intervention))
#42.	((Percutaneous Transluminal Coronary Angioplasty))
#43.	((PTCA))
#44.	(MeSH DESCRIPTOR Angioplasty EXPLODE ALL TREES)
#45.	((Blunt microdissection))
#46.	((laser or patch) adj angioplasty))
#47.	((Percutaneous Transluminal Angioplasty))
#48.	((Transluminal Coronary Angioplasty))
#49.	((Balloon adj3 coronary))
#50.	((Balloon adj3 angioplasty))
#51.	(MeSH DESCRIPTOR Stents EXPLODE ALL TREES)
#52.	((stent*))
#53.	(#24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52)

#54.	(MeSH DESCRIPTOR Aspirin)
#55.	((aspirin or acetylsalicylic acid))
#56.	((clopidogrel or plavix))
#57.	((ticagrelor or briliq))
#58.	((prasugrel or efiel or efiel or prasita))
#59.	MeSH DESCRIPTOR Prasugrel Hydrochloride
#60.	MeSH DESCRIPTOR Platelet Aggregation Inhibitors
#61.	((Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphaIIb beta3 or GPIIB IIIA))
#62.	MeSH DESCRIPTOR Platelet Glycoprotein GPIIb-IIIa Complex EXPLODE ALL TREES
#63.	MeSH DESCRIPTOR Receptors, Fibrinogen EXPLODE ALL TREES
#64.	((Abciximab or Reopro or Eptifibatid or Integrelin or Integrelin or Intrifiban or Tirofiban or Aggrastat))
#65.	MeSH DESCRIPTOR Adrenergic beta-Antagonists EXPLODE ALL TREES
#66.	((propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or progranol or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevilobol or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim))
#67.	(MeSH DESCRIPTOR propranolol)
#68.	(MeSH DESCRIPTOR acebutolol)
#69.	(MeSH DESCRIPTOR atenolol)
#70.	(MeSH DESCRIPTOR bisoprolol)
#71.	(MeSH DESCRIPTOR celiprolol)
#72.	(MeSH DESCRIPTOR labetalol)
#73.	(MeSH DESCRIPTOR metoprolol)
#74.	(MeSH DESCRIPTOR nadolol)
#75.	(MeSH DESCRIPTOR nebivolol)
#76.	(MeSH DESCRIPTOR oxprenolol)
#77.	(MeSH DESCRIPTOR pindolol)
#78.	(MeSH DESCRIPTOR sotalol)
#79.	(MeSH DESCRIPTOR timolol)
#80.	((beta adj3 block*))
#81.	((b adj3 block*))
#82.	((beta adj2 antagonist*))
#83.	MeSH DESCRIPTOR Antithrombins
#84.	(Antithrombin*)
#85.	((thrombin adj3 inhibitor*))
#86.	MeSH DESCRIPTOR Hirudins
#87.	(Hirudin*)
#88.	(Hirulog)
#89.	(Bivalirudin)
#90.	#54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89

#91.	(#23 AND (#53 OR #90))
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Appendix B: Bivalirudin

Acute coronary syndromes search strategy - bivalirudin

This literature search strategy was used for the following reviews:

- What is the clinical and cost effectiveness of bivalirudin as adjunctive pharmacotherapy in adults with STEMI intended for primary percutaneous coronary intervention

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2018}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

B.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 3: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 19 June 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 19 June 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 6 of 6 CENTRAL to 2019 Issue 6 of 6 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 2 of 4	None

Medline (Ovid) search terms

80.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
81.	Heart Arrest/
82.	(acute coronary adj2 syndrome*).ti,ab.
83.	((myocardial or heart) adj infarct*).ti,ab.
84.	(heart adj (attack* or event*)).ti,ab.
85.	((heart or cardiac) adj arrest*).ti,ab.
86.	(coronary adj2 thrombos*).ti,ab.

87.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
88.	"non-ST-segment elevation".ti,ab.
89.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
90.	"Q wave myocardial infarction".ti,ab.
91.	"non Q wave MI".ti,ab.
92.	NSTE-ACS.ti,ab.
93.	(subendocardial adj3 infarct*).ti,ab.
94.	((unstable or variant) adj2 angina*).ti,ab.
95.	(unstable adj2 coronary).ti,ab.
96.	or/1-16
97.	letter/
98.	editorial/
99.	news/
100.	exp historical article/
101.	Anecdotes as Topic/
102.	comment/
103.	case report/
104.	(letter or comment*).ti.
105.	or/18-25
106.	randomized controlled trial/ or random*.ti,ab.
107.	26 not 27
108.	animals/ not humans/
109.	exp Animals, Laboratory/
110.	exp Animal Experimentation/
111.	exp Models, Animal/
112.	exp Rodentia/
113.	(rat or rats or mouse or mice).ti.
114.	or/28-34
115.	17 not 35
116.	limit 36 to English language
117.	randomized controlled trial.pt.
118.	controlled clinical trial.pt.
119.	randomi#ed.ti,ab.
120.	placebo.ab.
121.	randomly.ti,ab.
122.	Clinical Trials as topic.sh.
123.	trial.ti.
124.	or/38-44
125.	Meta-Analysis/
126.	exp Meta-Analysis as Topic/
127.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
128.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
129.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
130.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.

131.	(search* adj4 literature).ab.
132.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
133.	cochrane.jw.
134.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
135.	or/46-55
136.	(bivalirudin or angiox or angiomax or hirulog).ti,ab.
137.	37 and 57 and (45 or 56)

Embase (Ovid) search terms

85.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
86.	heart arrest/
87.	(acute coronary adj2 syndrome*).ti,ab.
88.	((myocardial or heart) adj infarct*).ti,ab.
89.	(heart adj (attack* or event*)).ti,ab.
90.	((heart or cardiac) adj arrest*).ti,ab.
91.	(coronary adj2 thrombos*).ti,ab.
92.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
93.	"non-ST-segment elevation".ti,ab.
94.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
95.	"Q wave myocardial infarction".ti,ab.
96.	"non Q wave MI".ti,ab.
97.	(NSTE-ACS or STE-ACS).ti,ab.
98.	(subendocardial adj3 infarct*).ti,ab.
99.	((unstable or variant) adj2 angina*).ti,ab.
100.	(unstable adj2 coronary).ti,ab.
101.	or/1-16
102.	letter.pt. or letter/
103.	note.pt.
104.	editorial.pt.
105.	Case report/ or Case study/
106.	(letter or comment*).ti.
107.	or/18-22
108.	randomized controlled trial/ or random*.ti,ab.
109.	23 not 24
110.	animal/ not human/
111.	Nonhuman/
112.	exp Animal Experiment/
113.	exp Experimental animal/
114.	Animal model/
115.	exp Rodent/
116.	(rat or rats or mouse or mice).ti.
117.	or/25-32
118.	17 not 33
119.	limit 34 to English language

120.	random*.ti,ab.
121.	factorial*.ti,ab.
122.	(crossover* or cross over*).ti,ab.
123.	((doubl* or singl*) adj blind*).ti,ab.
124.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
125.	crossover procedure/
126.	single blind procedure/
127.	randomized controlled trial/
128.	double blind procedure/
129.	or/36-44
130.	systematic review/
131.	meta-analysis/
132.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
133.	((systematic or evidence) adj3 (review* or overview*)).ti,ab.
134.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
135.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
136.	(search* adj4 literature).ab.
137.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
138.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
139.	cochrane.jw.
140.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
141.	or/46-56
142.	*hirulog/ or *bivalirudin/
143.	(bivalirudin or angiox or angiomax or hirulog).ti,ab.
144.	58 or 59
145.	35 and 60 and (45 or 57)

Cochrane Library (Wiley) search terms

#44.	MeSH descriptor: [Acute Coronary Syndrome] this term only
#45.	MeSH descriptor: [Angina Pectoris] this term only
#46.	MeSH descriptor: [Angina, Unstable] this term only
#47.	MeSH descriptor: [Coronary Thrombosis] this term only
#48.	MeSH descriptor: [Myocardial Infarction] explode all trees
#49.	(or #1-#5)
#50.	MeSH descriptor: [Heart Arrest] this term only
#51.	(acute coronary near/2 syndrome*).ti,ab
#52.	((myocardial or heart) next infarct*).ti,ab
#53.	(heart next (attack* or event*)).ti,ab
#54.	((heart or cardiac) next arrest*).ti,ab
#55.	(coronary near/2 thrombos*).ti,ab
#56.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab
#57.	non-ST-segment elevation:ti,ab
#58.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab

#59.	Q wave myocardial infarction:ti,ab
#60.	non Q wave MI:ti,ab
#61.	NSTE-ACS:ti,ab
#62.	(subendocardial near/3 infarct*):ti,ab
#63.	((unstable or variant) near/2 angina*):ti,ab
#64.	(unstable near/2 coronary):ti,ab
#65.	(or #6-#21)
#66.	(bivalirudin or angiox or angiomax or hirulog):ti,ab
#67.	#22 and #23

B.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a search relating to acute coronary syndromes population combined with terms for interventions in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase using a filter for health economics studies.

Table 4: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Embase	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - 2003 – 31 March 2018 NHSEED - 2003 to 31 March 2015	None

Medline (Ovid) search terms

112.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
113.	Heart Arrest/
114.	(acute coronary adj2 syndrome*).ti,ab.
115.	((myocardial or heart) adj infarct*).ti,ab.
116.	(heart adj (attack* or event*)).ti,ab.
117.	((heart or cardiac) adj arrest*).ti,ab.
118.	(coronary adj2 thrombos*).ti,ab.
119.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
120.	"non-ST-segment elevation".ti,ab.
121.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
122.	"Q wave myocardial infarction".ti,ab.
123.	"non Q wave MI".ti,ab.
124.	NSTE-ACS.ti,ab.

125.	(subendocardial adj3 infarct*).ti,ab.
126.	((unstable or variant) adj2 angina*).ti,ab.
127.	(unstable adj2 coronary).ti,ab.
128.	or/1-16
129.	letter/
130.	editorial/
131.	news/
132.	exp historical article/
133.	Anecdotes as Topic/
134.	comment/
135.	case report/
136.	(letter or comment*).ti.
137.	or/18-25
138.	randomized controlled trial/ or random*.ti,ab.
139.	26 not 27
140.	animals/ not humans/
141.	exp Animals, Laboratory/
142.	exp Animal Experimentation/
143.	exp Models, Animal/
144.	exp Rodentia/
145.	(rat or rats or mouse or mice).ti.
146.	or/28-34
147.	17 not 35
148.	limit 36 to English language
149.	Economics/
150.	Value of life/
151.	exp "Costs and Cost Analysis"/
152.	exp Economics, Hospital/
153.	exp Economics, Medical/
154.	Economics, Nursing/
155.	Economics, Pharmaceutical/
156.	exp "Fees and Charges"/
157.	exp Budgets/
158.	budget*.ti,ab.
159.	cost*.ti.
160.	(economic* or pharmaco?economic*).ti.
161.	(price* or pricing*).ti,ab.
162.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
163.	(financ* or fee or fees).ti,ab.
164.	(value adj2 (money or monetary)).ti,ab.

165.	or/38-53
166.	37 and 54
167.	*Angiography/
168.	Angiocardiography/
169.	Coronary Angiography/
170.	Angiograph*.ti.
171.	Arteriograph*.ti.
172.	Angiocardiograph*.ti,ab.
173.	Coronary Angiograph*.ti,ab.
174.	Angiogram*.ti,ab.
175.	Cardioangiograph*.ti,ab.
176.	Angiocardiogram.ti,ab.
177.	Angio Cardiograph*.ti,ab.
178.	Coronary Arteriogra*.ti,ab.
179.	Coronarograph*.ti,ab.
180.	*Myocardial Revascularization/
181.	Angioplasty, Balloon, Coronary/
182.	(Myocardial adj revasculari?ation).ti,ab.
183.	PCI.ti,ab.
184.	Percutaneous coronary intervention.ti,ab.
185.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
186.	PTCA.ti,ab.
187.	exp Angioplasty/
188.	Blunt microdissection.ti,ab.
189.	((laser or patch) adj angioplasty).ti,ab.
190.	Percutaneous Transluminal Angioplasty.ti,ab.
191.	Transluminal Coronary Angioplasty.ti,ab.
192.	(Balloon adj3 coronary).ti,ab.
193.	(Balloon adj3 angioplasty).ti,ab.
194.	exp STENTS/
195.	stent*.ti,ab.
196.	Or/56-84
197.	aspirin/
198.	(aspirin or acetylsalicylic acid).ti,ab.
199.	(clopidogrel or plavix).ti,ab.
200.	(ticagrelor or briliq).ti,ab.
201.	(prasugrel or efient or effient or prasita).ti,ab.
202.	Prasugrel Hydrochloride/
203.	platelet aggregation inhibitors/
204.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
205.	exp Platelet Glycoprotein GPIIb-IIIa Complex/
206.	exp Receptors, Fibrinogen/
207.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
208.	exp adrenergic beta-antagonists/

209.	(propranolol or angilol or inderal-la or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or loproser or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
210.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or celiprolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/
211.	(beta adj3 block*).ti,ab.
212.	(b adj3 block*).ti,ab.
213.	(beta adj2 antagonist*).ti,ab.
214.	Antithrombins/
215.	Antithrombin*.ti,ab.
216.	(thrombin adj3 inhibitor*).ti,ab.
217.	Hirudins/
218.	Hirudin*.ti,ab.
219.	Hirulog.ti,ab.
220.	Bivalirudin.ti,ab.
221.	Or/86-109
222.	55 and (85 or 110)

Embase (Ovid) search terms

107.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
108.	heart arrest/
109.	(acute coronary adj2 syndrome*).ti,ab.
110.	((myocardial or heart) adj infarct*).ti,ab.
111.	(heart adj (attack* or event*)).ti,ab.
112.	((heart or cardiac) adj arrest*).ti,ab.
113.	(coronary adj2 thrombos*).ti,ab.
114.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
115.	"non-ST-segment elevation".ti,ab.
116.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
117.	"Q wave myocardial infarction".ti,ab.
118.	"non Q wave MI".ti,ab.
119.	NSTE-ACS.ti,ab.
120.	(subendocardial adj3 infarct*).ti,ab.
121.	((unstable or variant) adj2 angina*).ti,ab.
122.	(unstable adj2 coronary).ti,ab.
123.	or/1-16
124.	letter.pt. or letter/
125.	note.pt.
126.	editorial.pt.
127.	Case report/ or Case study/

128.	(letter or comment*).ti.
129.	or/18-22
130.	randomized controlled trial/ or random*.ti,ab.
131.	23 not 24
132.	animal/ not human/
133.	Nonhuman/
134.	exp Animal Experiment/
135.	exp Experimental animal/
136.	Animal model/
137.	exp Rodent/
138.	(rat or rats or mouse or mice).ti.
139.	or/25-32
140.	17 not 33
141.	limit 34 to English language
142.	health economics/
143.	exp economic evaluation/
144.	exp health care cost/
145.	exp fee/
146.	budget/
147.	funding/
148.	budget*.ti,ab.
149.	cost*.ti.
150.	(economic* or pharmaco?economic*).ti.
151.	(price* or pricing*).ti,ab.
152.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)),.ab.
153.	(financ* or fee or fees).ti,ab.
154.	(value adj2 (money or monetary)).ti,ab.
155.	or/36-48
156.	35 and 49
157.	angiography/
158.	angiocardiography/
159.	coronary angiography/
160.	Angiograph*.ti.
161.	Arteriograph*.ti.
162.	Angiocardiograph*.ti,ab.
163.	Coronary Angiograph*.ti,ab.
164.	Angiogram*.ti,ab.
165.	Cardioangiograph*.ti,ab.
166.	Angiocardiogram.ti,ab.
167.	Angio Cardiograph*.ti,ab.

168.	Coronary Arteriogra*.ti,ab.
169.	Coronarograph*.ti,ab.
170.	*heart muscle revascularization/
171.	transluminal coronary angioplasty/
172.	(Myocardial adj revasculari?ation).ti,ab.
173.	PCI.ti,ab.
174.	Percutaneous coronary intervention.ti,ab.
175.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
176.	PTCA.ti,ab.
177.	*angioplasty/
178.	Blunt microdissection.ti,ab.
179.	((laser or patch) adj angioplasty).ti,ab.
180.	Percutaneous Transluminal Angioplasty.ti,ab.
181.	Transluminal Coronary Angioplasty.ti,ab.
182.	(Balloon adj3 coronary).ti,ab.
183.	(Balloon adj3 angioplasty).ti,ab.
184.	exp STENTS/
185.	stent*.ti,ab.
186.	Or/51-79
187.	acetylsalicylic acid/
188.	(aspirin or acetylsalicylic acid).ti,ab.
189.	(clopidogrel or plavix).ti,ab.
190.	(ticagrelor or briliq).ti,ab.
191.	(prasugrel or efient or effient or prasita).ti,ab.
192.	prasugrel/
193.	antithrombocytic agent/
194.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
195.	exp fibrinogen receptor/
196.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
197.	abciximab/ or eptifibatide/ or tirofiban/
198.	exp beta adrenergic receptor blocking agent/
199.	(propranolol or angilol or inderal-1a or half-inderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
200.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or bisoprolol fumarate/ or carvedilol/ or celiprolol/ or esmolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/ or timolol maleate/
201.	(beta adj3 block*).ti,ab.

202.	(b adj3 block*).ti,ab.
203.	(beta adj2 antagonist*).ti,ab.
204.	antithrombin/
205.	Antithrombin*.ti,ab.
206.	(thrombin adj3 inhibitor*).ti,ab.
207.	hirudin derivative/
208.	Hirudin*.ti,ab.
209.	Hirulog.ti,ab.
210.	Bivalirudin.ti,ab.
211.	Or/81-104
212.	50 and (80 or 105)

NHS EED and HTA (CRD) search terms

#92.	MeSH DESCRIPTOR Acute Coronary Syndrome
#93.	(MeSH DESCRIPTOR angina pectoris)
#94.	(MeSH DESCRIPTOR Angina, Unstable)
#95.	(MeSH DESCRIPTOR Coronary Thrombosis)
#96.	MeSH DESCRIPTOR Myocardial Infarction EXPLODE ALL TREES
#97.	#1 OR #2 OR #3 OR #4 OR #5
#98.	(MeSH DESCRIPTOR Heart Arrest)
#99.	((acute coronary adj2 syndrome*))
#100.	((myocardial or heart) adj infarct*))
#101.	((heart adj (attack* or event*)))
#102.	((heart or cardiac) adj arrest*))
#103.	((coronary adj2 thrombos*))
#104.	((stemi or st-segment or st segment or st-elevation or st elevation))
#105.	("non-ST-segment elevation")
#106.	((non-STEMI or NSTEMI or nonSTEMI))
#107.	("Q wave myocardial infarction")
#108.	("non Q wave MI")
#109.	(NSTE-ACS)
#110.	(STE-ACS)
#111.	((subendocardial adj3 infarct*))
#112.	((unstable or variant) adj2 angina*))
#113.	((unstable adj2 coronary))
#114.	(#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22)
#115.	(MeSH DESCRIPTOR Angiography)
#116.	(MeSH DESCRIPTOR Angiocardiology)
#117.	((MeSH DESCRIPTOR Coronary Angiography))
#118.	((Angiograph*))
#119.	((Arteriograph*))
#120.	((Angiocardiology*))
#121.	((Coronary Angiograph*))
#122.	((Angiogram*))

#123.	((Cardioangiograph*))
#124.	((Angiocardiogram))
#125.	((Angio Cardiograph*))
#126.	((Coronary Arteriogra*))
#127.	((Coronarograph*))
#128.	(MeSH DESCRIPTOR Myocardial Revascularization)
#129.	(MeSH DESCRIPTOR Angioplasty, Balloon, Coronary)
#130.	((Myocardial adj revasculari?ation))
#131.	((PCI))
#132.	((Percutaneous coronary intervention))
#133.	((Percutaneous Transluminal Coronary Angioplasty))
#134.	((PTCA))
#135.	(MeSH DESCRIPTOR Angioplasty EXPLODE ALL TREES)
#136.	((Blunt microdissection))
#137.	((laser or patch) adj angioplasty))
#138.	((Percutaneous Transluminal Angioplasty))
#139.	((Transluminal Coronary Angioplasty))
#140.	((Balloon adj3 coronary))
#141.	((Balloon adj3 angioplasty))
#142.	(MeSH DESCRIPTOR Stents EXPLODE ALL TREES)
#143.	((stent*))
#144.	(#24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52)
#145.	(MeSH DESCRIPTOR Aspirin)
#146.	((aspirin or acetylsalicylic acid))
#147.	((clopidogrel or plavix))
#148.	((ticagrelor or briliq))
#149.	((prasugrel or efiel or efiel or prasita))
#150.	MeSH DESCRIPTOR Prasugrel Hydrochloride
#151.	MeSH DESCRIPTOR Platelet Aggregation Inhibitors
#152.	((Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphaIIb beta3 or GPIIb IIIA))
#153.	MeSH DESCRIPTOR Platelet Glycoprotein GPIIb-IIIa Complex EXPLODE ALL TREES
#154.	MeSH DESCRIPTOR Receptors, Fibrinogen EXPLODE ALL TREES
#155.	((Abciximab or Reopro or Eptifibatid or Integrelin or Integrelin or Intrifiban or Tirofiban or Aggrastat))
#156.	MeSH DESCRIPTOR Adrenergic beta-Antagonists EXPLODE ALL TREES
#157.	((propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevilobol or labetalol or trandate or metoprolol or betaloc or loproso or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim))
#158.	(MeSH DESCRIPTOR propranolol)
#159.	(MeSH DESCRIPTOR acebutolol)
#160.	(MeSH DESCRIPTOR atenolol)

#161.	(MeSH DESCRIPTOR bisoprolol)
#162.	(MeSH DESCRIPTOR celiprolol)
#163.	(MeSH DESCRIPTOR labetalol)
#164.	(MeSH DESCRIPTOR metoprolol)
#165.	(MeSH DESCRIPTOR nadolol)
#166.	(MeSH DESCRIPTOR nebivolol)
#167.	(MeSH DESCRIPTOR oxprenolol)
#168.	(MeSH DESCRIPTOR pindolol)
#169.	(MeSH DESCRIPTOR sotalol)
#170.	(MeSH DESCRIPTOR timolol)
#171.	((beta adj3 block*))
#172.	((b adj3 block*))
#173.	((beta adj2 antagonist*))
#174.	MeSH DESCRIPTOR Antithrombins
#175.	(Antithrombin*)
#176.	((thrombin adj3 inhibitor*))
#177.	MeSH DESCRIPTOR Hirudins
#178.	(Hirudin*)
#179.	(Hirulog)
#180.	(Bivalirudin)
#181.	#54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89
#182.	(#23 AND (#53 OR #90))

Appendix C: Multi-vessel or culprit vessel only PPCI

Acute coronary syndromes search strategy – culprit vessel

This literature search strategy was used for the following reviews;

- What is the clinical and cost effectiveness of multi-vessel PCI compared to culprit-only PPCI in people with STEMI and multivessel coronary disease undergoing primary PCI (PPCI)?

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018. {NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

C.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well

described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 5: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	01 January 1998 – 22 July 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	01 January 1998 – 22 July 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews 1998 to 2019 Issue 7 of 12 CENTRAL 1998 to 2019 Issue 7 of 12 DARE, and NHSEED 1998 to 2015 Issue 2 of 4 HTA to 1998 to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

138.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
139.	Heart Arrest/
140.	(acute coronary adj2 syndrome*).ti,ab.
141.	((myocardial or heart) adj infarct*).ti,ab.
142.	(heart adj (attack* or event*)).ti,ab.
143.	((heart or cardiac) adj arrest*).ti,ab.
144.	(coronary adj2 thrombos*).ti,ab.
145.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
146.	"non-ST-segment elevation".ti,ab.
147.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
148.	"Q wave myocardial infarction".ti,ab.
149.	"non Q wave MI".ti,ab.
150.	NSTE-ACS.ti,ab.
151.	(subendocardial adj3 infarct*).ti,ab.
152.	((unstable or variant) adj2 angina*).ti,ab.
153.	(unstable adj2 coronary).ti,ab.
154.	or/1-16
155.	letter/
156.	editorial/
157.	news/
158.	exp historical article/
159.	Anecdotes as Topic/
160.	comment/
161.	case report/
162.	(letter or comment*).ti.

163.	or/18-25
164.	randomized controlled trial/ or random*.ti,ab.
165.	26 not 27
166.	animals/ not humans/
167.	exp Animals, Laboratory/
168.	exp Animal Experimentation/
169.	exp Models, Animal/
170.	exp Rodentia/
171.	(rat or rats or mouse or mice).ti.
172.	or/28-34
173.	17 not 35
174.	limit 36 to English language
175.	(culprit or non-culprit or nonculprit).ti,ab.
176.	((infarct-related or infarct related or non-infarct-related) adj2 (artery or arteries)).ti,ab.
177.	(complete adj2 revasc*).ti,ab.
178.	((multivessel* or multi-vessel* or single-vessel*) adj3 (percutaneous coronary intervention* or PCI or PPCI or PTCA or stent* or revasc* or recanali* or angioplast*)).ti,ab.
179.	or/38-41
180.	37 and 42
181.	randomized controlled trial.pt.
182.	controlled clinical trial.pt.
183.	randomi#ed.ti,ab.
184.	placebo.ab.
185.	randomly.ti,ab.
186.	Clinical Trials as topic.sh.
187.	trial.ti.
188.	or/44-50
189.	Meta-Analysis/
190.	exp Meta-Analysis as Topic/
191.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
192.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
193.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
194.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
195.	(search* adj4 literature).ab.
196.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
197.	cochrane.jw.
198.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
199.	or/52-61
200.	43 and (51 or 62)

Embase (Ovid) search terms

146.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
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147.	heart arrest/
148.	(acute coronary adj2 syndrome*).ti,ab.
149.	((myocardial or heart) adj infarct*).ti,ab.
150.	(heart adj (attack* or event*)).ti,ab.
151.	((heart or cardiac) adj arrest*).ti,ab.
152.	(coronary adj2 thrombos*).ti,ab.
153.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
154.	"non-ST-segment elevation".ti,ab.
155.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
156.	"Q wave myocardial infarction".ti,ab.
157.	"non Q wave MI".ti,ab.
158.	NSTE-ACS.ti,ab.
159.	(subendocardial adj3 infarct*).ti,ab.
160.	((unstable or variant) adj2 angina*).ti,ab.
161.	(unstable adj2 coronary).ti,ab.
162.	or/1-16
163.	letter.pt. or letter/
164.	note.pt.
165.	editorial.pt.
166.	Case report/ or Case study/
167.	(letter or comment*).ti.
168.	or/18-22
169.	randomized controlled trial/ or random*.ti,ab.
170.	23 not 24
171.	animal/ not human/
172.	Nonhuman/
173.	exp Animal Experiment/
174.	exp Experimental animal/
175.	Animal model/
176.	exp Rodent/
177.	(rat or rats or mouse or mice).ti.
178.	or/25-32
179.	17 not 33
180.	limit 34 to English language
181.	(culprit or non-culprit or nonculprit).ti,ab.
182.	((infarct-related or infarct related or non-infarct-related) adj2 (artery or arteries)).ti,ab.
183.	(complete adj2 revasc*).ti,ab.
184.	((multivessel* or multi-vessel* or single-vessel*) adj3 (percutaneous coronary intervention* or PCI or PPCI or PTCA or stent* or revasc* or recanali* or angioplast*).ti,ab.
185.	or/36-39
186.	35 and 40
187.	random*.ti,ab.
188.	factorial*.ti,ab.
189.	(crossover* or cross over*).ti,ab.
190.	((doubl* or singl*) adj blind*).ti,ab.

191.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
192.	crossover procedure/
193.	single blind procedure/
194.	randomized controlled trial/
195.	double blind procedure/
196.	or/42-50
197.	systematic review/
198.	meta-analysis/
199.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
200.	((systematic or evidence) adj3 (review* or overview*)).ti,ab.
201.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
202.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
203.	(search* adj4 literature).ab.
204.	(medline or pubmed or cochrane or embase or psychlit or psychlit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
205.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
206.	cochrane.jw.
207.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
208.	or/52-62
209.	41 and (51 or 63)

Cochrane Library (Wiley) search terms

#68.	MeSH descriptor: [Acute Coronary Syndrome] this term only
#69.	MeSH descriptor: [Angina Pectoris] this term only
#70.	MeSH descriptor: [Angina, Unstable] this term only
#71.	MeSH descriptor: [Coronary Thrombosis] this term only
#72.	MeSH descriptor: [Myocardial Infarction] explode all trees
#73.	(or #1-#5)
#74.	MeSH descriptor: [Heart Arrest] this term only
#75.	(acute coronary near/2 syndrome*).ti,ab
#76.	((myocardial or heart) next infarct*).ti,ab
#77.	(heart next (attack* or event*)).ti,ab
#78.	((heart or cardiac) next arrest*).ti,ab
#79.	(coronary near/2 thrombos*).ti,ab
#80.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab
#81.	non-ST-segment elevation.ti,ab
#82.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab
#83.	Q wave myocardial infarction.ti,ab
#84.	non Q wave MI.ti,ab
#85.	NSTE-ACS.ti,ab
#86.	(subendocardial near/3 infarct*).ti,ab
#87.	((unstable or variant) near/2 angina*).ti,ab
#88.	(unstable near/2 coronary).ti,ab
#89.	(or #6-#21)

#90.	(culprit or non-culprit or nonculprit):ti,ab
#91.	((infarct-related or infarct related or non-infarct-related) near/2 (artery or arteries)):ti,ab
#92.	(complete near/2 revasc*):ti,ab
#93.	((multivessel* or multi-vessel* or single-vessel*) near/3 (percutaneous coronary intervention* or PCI or PPCI or PTCA or stent* or revasc* or recanali* or angioplast*)):ti,ab
#94.	(or #23-#26)
#95.	#22 and #27

C.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a search relating to acute coronary syndromes population combined with terms for interventions in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase using a filter for health economics studies.

Table 6: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Embase	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - 2003 – 31 March 2018 NHSEED - 2003 to 31 March 2015	None

Medline (Ovid) search terms

223.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
224.	Heart Arrest/
225.	(acute coronary adj2 syndrome*).ti,ab.
226.	((myocardial or heart) adj infarct*).ti,ab.
227.	(heart adj (attack* or event*)).ti,ab.
228.	((heart or cardiac) adj arrest*).ti,ab.
229.	(coronary adj2 thrombos*).ti,ab.
230.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
231.	"non-ST-segment elevation".ti,ab.
232.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
233.	"Q wave myocardial infarction".ti,ab.
234.	"non Q wave MI".ti,ab.
235.	NSTE-ACS.ti,ab.
236.	(subendocardial adj3 infarct*).ti,ab.
237.	((unstable or variant) adj2 angina*).ti,ab.

238.	(unstable adj2 coronary).ti,ab.
239.	or/1-16
240.	letter/
241.	editorial/
242.	news/
243.	exp historical article/
244.	Anecdotes as Topic/
245.	comment/
246.	case report/
247.	(letter or comment*).ti.
248.	or/18-25
249.	randomized controlled trial/ or random*.ti,ab.
250.	26 not 27
251.	animals/ not humans/
252.	exp Animals, Laboratory/
253.	exp Animal Experimentation/
254.	exp Models, Animal/
255.	exp Rodentia/
256.	(rat or rats or mouse or mice).ti.
257.	or/28-34
258.	17 not 35
259.	limit 36 to English language
260.	Economics/
261.	Value of life/
262.	exp "Costs and Cost Analysis"/
263.	exp Economics, Hospital/
264.	exp Economics, Medical/
265.	Economics, Nursing/
266.	Economics, Pharmaceutical/
267.	exp "Fees and Charges"/
268.	exp Budgets/
269.	budget*.ti,ab.
270.	cost*.ti.
271.	(economic* or pharmaco?economic*).ti.
272.	(price* or pricing*).ti,ab.
273.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
274.	(financ* or fee or fees).ti,ab.
275.	(value adj2 (money or monetary)).ti,ab.
276.	or/38-53
277.	37 and 54

278.	*Angiography/
279.	Angiocardiology/
280.	Coronary Angiography/
281.	Angiograph*.ti.
282.	Arteriograph*.ti.
283.	Angiocardiology*.ti,ab.
284.	Coronary Angiograph*.ti,ab.
285.	Angiogram*.ti,ab.
286.	Cardioangiograph*.ti,ab.
287.	Angiocardiology.ti,ab.
288.	Angio Cardiograph*.ti,ab.
289.	Coronary Arteriogra*.ti,ab.
290.	Coronarograph*.ti,ab.
291.	*Myocardial Revascularization/
292.	Angioplasty, Balloon, Coronary/
293.	(Myocardial adj revasculari?ation).ti,ab.
294.	PCI.ti,ab.
295.	Percutaneous coronary intervention.ti,ab.
296.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
297.	PTCA.ti,ab.
298.	exp Angioplasty/
299.	Blunt microdissection.ti,ab.
300.	((laser or patch) adj angioplasty).ti,ab.
301.	Percutaneous Transluminal Angioplasty.ti,ab.
302.	Transluminal Coronary Angioplasty.ti,ab.
303.	(Balloon adj3 coronary).ti,ab.
304.	(Balloon adj3 angioplasty).ti,ab.
305.	exp STENTS/
306.	stent*.ti,ab.
307.	Or/56-84
308.	aspirin/
309.	(aspirin or acetylsalicylic acid).ti,ab.
310.	(clopidogrel or plavix).ti,ab.
311.	(ticagrelor or briliq).ti,ab.
312.	(prasugrel or efient or effient or prasita).ti,ab.
313.	Prasugrel Hydrochloride/
314.	platelet aggregation inhibitors/
315.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphaIIb beta3 or GPIIB IIIA).ti,ab.
316.	exp Platelet Glycoprotein GPIIb-IIIa Complex/
317.	exp Receptors, Fibrinogen/
318.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrelin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
319.	exp adrenergic beta-antagonists/
320.	(propranolol or angilol or inderal-la or half-inderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or

	emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
321.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or celiprolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/
322.	(beta adj3 block*).ti,ab.
323.	(b adj3 block*).ti,ab.
324.	(beta adj2 antagonist*).ti,ab.
325.	Antithrombins/
326.	Antithrombin*.ti,ab.
327.	(thrombin adj3 inhibitor*).ti,ab.
328.	Hirudins/
329.	Hirudin*.ti,ab.
330.	Hirulog.ti,ab.
331.	Bivalirudin.ti,ab.
332.	Or/86-109
333.	55 and (85 or 110)

Embase (Ovid) search terms

213.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
214.	heart arrest/
215.	(acute coronary adj2 syndrome*).ti,ab.
216.	((myocardial or heart) adj infarct*).ti,ab.
217.	(heart adj (attack* or event*)).ti,ab.
218.	((heart or cardiac) adj arrest*).ti,ab.
219.	(coronary adj2 thrombos*).ti,ab.
220.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
221.	"non-ST-segment elevation".ti,ab.
222.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
223.	"Q wave myocardial infarction".ti,ab.
224.	"non Q wave MI".ti,ab.
225.	NSTE-ACS.ti,ab.
226.	(subendocardial adj3 infarct*).ti,ab.
227.	((unstable or variant) adj2 angina*).ti,ab.
228.	(unstable adj2 coronary).ti,ab.
229.	or/1-16
230.	letter.pt. or letter/
231.	note.pt.
232.	editorial.pt.
233.	Case report/ or Case study/
234.	(letter or comment*).ti.
235.	or/18-22

236.	randomized controlled trial/ or random*.ti,ab.
237.	23 not 24
238.	animal/ not human/
239.	Nonhuman/
240.	exp Animal Experiment/
241.	exp Experimental animal/
242.	Animal model/
243.	exp Rodent/
244.	(rat or rats or mouse or mice).ti.
245.	or/25-32
246.	17 not 33
247.	limit 34 to English language
248.	health economics/
249.	exp economic evaluation/
250.	exp health care cost/
251.	exp fee/
252.	budget/
253.	funding/
254.	budget*.ti,ab.
255.	cost*.ti.
256.	(economic* or pharmaco?economic*).ti.
257.	(price* or pricing*).ti,ab.
258.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
259.	(financ* or fee or fees).ti,ab.
260.	(value adj2 (money or monetary)).ti,ab.
261.	or/36-48
262.	35 and 49
263.	angiography/
264.	angiocardiography/
265.	coronary angiography/
266.	Angiograph*.ti.
267.	Arteriograph*.ti.
268.	Angiocardiograph*.ti,ab.
269.	Coronary Angiograph*.ti,ab.
270.	Angiogram*.ti,ab.
271.	Cardioangiograph*.ti,ab.
272.	Angiocardiogram.ti,ab.
273.	Angio Cardiograph*.ti,ab.
274.	Coronary Arteriogra*.ti,ab.
275.	Coronarograph*.ti,ab.

276.	*heart muscle revascularization/
277.	transluminal coronary angioplasty/
278.	(Myocardial adj revasculari?ation).ti,ab.
279.	PCI.ti,ab.
280.	Percutaneous coronary intervention.ti,ab.
281.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
282.	PTCA.ti,ab.
283.	*angioplasty/
284.	Blunt microdissection.ti,ab.
285.	((laser or patch) adj angioplasty).ti,ab.
286.	Percutaneous Transluminal Angioplasty.ti,ab.
287.	Transluminal Coronary Angioplasty.ti,ab.
288.	(Balloon adj3 coronary).ti,ab.
289.	(Balloon adj3 angioplasty).ti,ab.
290.	exp STENTS/
291.	stent*.ti,ab.
292.	Or/51-79
293.	acetylsalicylic acid/
294.	(aspirin or acetylsalicylic acid).ti,ab.
295.	(clopidogrel or plavix).ti,ab.
296.	(ticagrelor or briliq).ti,ab.
297.	(prasugrel or efient or effient or prasita).ti,ab.
298.	prasugrel/
299.	antithrombocytic agent/
300.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
301.	exp fibrinogen receptor/
302.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
303.	abciximab/ or eptifibatide/ or tirofiban/
304.	exp beta adrenergic receptor blocking agent/
305.	(propranolol or angilol or inderal-1a or half-inderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopesor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
306.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or bisoprolol fumarate/ or carvedilol/ or celiprolol/ or esmolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/ or timolol maleate/
307.	(beta adj3 block*).ti,ab.
308.	(b adj3 block*).ti,ab.
309.	(beta adj2 antagonist*).ti,ab.

310.	antithrombin/
311.	Antithrombin*.ti,ab.
312.	(thrombin adj3 inhibitor*).ti,ab.
313.	hirudin derivative/
314.	Hirudin*.ti,ab.
315.	Hirulog.ti,ab.
316.	Bivalirudin.ti,ab.
317.	Or/81-104
318.	50 and (80 or 105)

NHS EED and HTA (CRD) search terms

#183.	MeSH DESCRIPTOR Acute Coronary Syndrome
#184.	(MeSH DESCRIPTOR angina pectoris)
#185.	(MeSH DESCRIPTOR Angina, Unstable)
#186.	(MeSH DESCRIPTOR Coronary Thrombosis)
#187.	MeSH DESCRIPTOR Myocardial Infarction EXPLODE ALL TREES
#188.	#1 OR #2 OR #3 OR #4 OR #5
#189.	(MeSH DESCRIPTOR Heart Arrest)
#190.	((acute coronary adj2 syndrome*))
#191.	((myocardial or heart) adj infarct*))
#192.	((heart adj (attack* or event*))
#193.	((heart or cardiac) adj arrest*))
#194.	((coronary adj2 thrombos*))
#195.	((stemi or st-segment or st segment or st-elevation or st elevation))
#196.	("non-ST-segment elevation")
#197.	((non-STEMI or NSTEMI or nonSTEMI))
#198.	("Q wave myocardial infarction")
#199.	("non Q wave MI")
#200.	(NSTE-ACS)
#201.	(STE-ACS)
#202.	((subendocardial adj3 infarct*))
#203.	((unstable or variant) adj2 angina*))
#204.	((unstable adj2 coronary))
#205.	(#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22)
#206.	(MeSH DESCRIPTOR Angiography)
#207.	(MeSH DESCRIPTOR Angiocardiography)
#208.	((MeSH DESCRIPTOR Coronary Angiography))
#209.	((Angiograph*))
#210.	((Arteriograph*))
#211.	((Angiocardiograph*))
#212.	((Coronary Angiograph*))
#213.	((Angiogram*))
#214.	((Cardioangiograph*))
#215.	((Angiocardiogram))

#216.	((Angio Cardiograph*))
#217.	((Coronary Arteriogra*))
#218.	((Coronarograph*))
#219.	(MeSH DESCRIPTOR Myocardial Revascularization)
#220.	(MeSH DESCRIPTOR Angioplasty, Balloon, Coronary)
#221.	((Myocardial adj revasculari?ation))
#222.	((PCI))
#223.	((Percutaneous coronary intervention))
#224.	((Percutaneous Transluminal Coronary Angioplasty))
#225.	((PTCA))
#226.	(MeSH DESCRIPTOR Angioplasty EXPLODE ALL TREES)
#227.	((Blunt microdissection))
#228.	((laser or patch) adj angioplasty))
#229.	((Percutaneous Transluminal Angioplasty))
#230.	((Transluminal Coronary Angioplasty))
#231.	((Balloon adj3 coronary))
#232.	((Balloon adj3 angioplasty))
#233.	(MeSH DESCRIPTOR Stents EXPLODE ALL TREES)
#234.	((stent*))
#235.	(#24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52)
#236.	(MeSH DESCRIPTOR Aspirin)
#237.	((aspirin or acetylsalicylic acid))
#238.	((clopidogrel or plavix))
#239.	((ticagrelor or brilique))
#240.	((prasugrel or efient or effient or prasita))
#241.	MeSH DESCRIPTOR Prasugrel Hydrochloride
#242.	MeSH DESCRIPTOR Platelet Aggregation Inhibitors
#243.	((Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA))
#244.	MeSH DESCRIPTOR Platelet Glycoprotein GPIIb-IIIa Complex EXPLODE ALL TREES
#245.	MeSH DESCRIPTOR Receptors, Fibrinogen EXPLODE ALL TREES
#246.	((Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat))
#247.	MeSH DESCRIPTOR Adrenergic beta-Antagonists EXPLODE ALL TREES
#248.	((propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim))
#249.	(MeSH DESCRIPTOR propranolol)
#250.	(MeSH DESCRIPTOR acebutolol)
#251.	(MeSH DESCRIPTOR atenolol)
#252.	(MeSH DESCRIPTOR bisoprolol)
#253.	(MeSH DESCRIPTOR celiprolol)

#254.	(MeSH DESCRIPTOR labetalol)
#255.	(MeSH DESCRIPTOR metoprolol)
#256.	(MeSH DESCRIPTOR nadolol)
#257.	(MeSH DESCRIPTOR nebivolol)
#258.	(MeSH DESCRIPTOR oxprenolol)
#259.	(MeSH DESCRIPTOR pindolol)
#260.	(MeSH DESCRIPTOR sotalol)
#261.	(MeSH DESCRIPTOR timolol)
#262.	((beta adj3 block*))
#263.	((b adj3 block*))
#264.	((beta adj2 antagonist*))
#265.	MeSH DESCRIPTOR Antithrombins
#266.	(Antithrombin*)
#267.	((thrombin adj3 inhibitor*))
#268.	MeSH DESCRIPTOR Hirudins
#269.	(Hirudin*)
#270.	(Hirulog)
#271.	(Bivalirudin)
#272.	#54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89
#273.	(#23 AND (#53 OR #90))

Appendix D: Drug-eluting stents

Acute coronary syndromes search strategy – drug-eluting stents

This literature search strategy was used for the following reviews;

- What is the clinical and cost effectiveness of drug-eluting stents in adults with acute coronary syndromes, including those with unstable angina or NSTEMI undergoing percutaneous coronary intervention and those with STEMI undergoing primary percutaneous coronary intervention?

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018 <https://www.nice.org.uk/guidance/pmg20/resources/developing-nice-guidelines-the-manual-pdf-72286708700869>.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

D.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well

described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 7: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 24 June 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 24 June 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 6 of 12 CENTRAL to 2019 Issue 6 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

201.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
202.	Heart Arrest/
203.	(acute coronary adj2 syndrome*).ti,ab.
204.	((myocardial or heart) adj infarct*).ti,ab.
205.	(heart adj (attack* or event*)).ti,ab.
206.	((heart or cardiac) adj arrest*).ti,ab.
207.	(coronary adj2 thrombos*).ti,ab.
208.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
209.	"non-ST-segment elevation".ti,ab.
210.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
211.	"Q wave myocardial infarction".ti,ab.
212.	"non Q wave MI".ti,ab.
213.	(NSTE-ACS or STE-ACS).ti,ab.
214.	(subendocardial adj3 infarct*).ti,ab.
215.	((unstable or variant) adj2 angina*).ti,ab.
216.	(unstable adj2 coronary).ti,ab.
217.	or/1-16
218.	letter/
219.	editorial/
220.	news/
221.	exp historical article/
222.	Anecdotes as Topic/
223.	comment/
224.	case report/
225.	(letter or comment*).ti.

226.	or/18-25
227.	randomized controlled trial/ or random*.ti,ab.
228.	26 not 27
229.	animals/ not humans/
230.	exp Animals, Laboratory/
231.	exp Animal Experimentation/
232.	exp Models, Animal/
233.	exp Rodentia/
234.	(rat or rats or mouse or mice).ti.
235.	or/28-34
236.	17 not 35
237.	limit 36 to English language
238.	randomized controlled trial.pt.
239.	controlled clinical trial.pt.
240.	randomi#ed.ti,ab.
241.	placebo.ab.
242.	randomly.ti,ab.
243.	Clinical Trials as topic.sh.
244.	trial.ti.
245.	or/38-44
246.	Meta-Analysis/
247.	exp Meta-Analysis as Topic/
248.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
249.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
250.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
251.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
252.	(search* adj4 literature).ab.
253.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
254.	cochrane.jw.
255.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
256.	or/46-55
257.	Percutaneous Coronary Intervention/
258.	Percutaneous coronary intervention*.ti,ab.
259.	(PPCI or PCI).ti,ab.
260.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
261.	PTCA.ti,ab.
262.	Angioplasty, Balloon, Coronary/
263.	exp Angioplasty/
264.	(Balloon adj3 coronary).ti,ab.
265.	((primary or coronary or transluminal or balloon) adj3 angioplasty).ti,ab.
266.	Coronary artery dilat*.ti,ab.
267.	or/57-66
268.	exp *Stents/

269.	drug eluting stent*.ti,ab.
270.	(eluting adj3 stent*).ti,ab.
271.	((paclitaxel or sirolimus or everolimus or biolimus or ridaforolimus or zotarolimus or novolimus) adj3 stent*).ti,ab.
272.	or/68-71
273.	37 and 67 and 72
274.	73 and (45 or 56)

Embase (Ovid) search terms

210.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
211.	heart arrest/
212.	(acute coronary adj2 syndrome*).ti,ab.
213.	((myocardial or heart) adj infarct*).ti,ab.
214.	(heart adj (attack* or event*).ti,ab.
215.	((heart or cardiac) adj arrest*).ti,ab.
216.	(coronary adj2 thrombos*).ti,ab.
217.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
218.	"non-ST-segment elevation".ti,ab.
219.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
220.	"Q wave myocardial infarction".ti,ab.
221.	"non Q wave MI".ti,ab.
222.	(NSTE-ACS or STE-ACS).ti,ab.
223.	(subendocardial adj3 infarct*).ti,ab.
224.	((unstable or variant) adj2 angina*).ti,ab.
225.	(unstable adj2 coronary).ti,ab.
226.	or/1-16
227.	letter.pt. or letter/
228.	note.pt.
229.	editorial.pt.
230.	Case report/ or Case study/
231.	(letter or comment*).ti.
232.	or/18-22
233.	randomized controlled trial/ or random*.ti,ab.
234.	23 not 24
235.	animal/ not human/
236.	Nonhuman/
237.	exp Animal Experiment/
238.	exp Experimental animal/
239.	Animal model/
240.	exp Rodent/
241.	(rat or rats or mouse or mice).ti.
242.	or/25-32
243.	17 not 33
244.	limit 34 to English language
245.	random*.ti,ab.

246.	factorial*.ti,ab.
247.	(crossover* or cross over*).ti,ab.
248.	((doubl* or singl*) adj blind*).ti,ab.
249.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
250.	crossover procedure/
251.	single blind procedure/
252.	randomized controlled trial/
253.	double blind procedure/
254.	or/36-44
255.	systematic review/
256.	meta-analysis/
257.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
258.	((systematic or evidence) adj3 (review* or overview*)).ti,ab.
259.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
260.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
261.	(search* adj4 literature).ab.
262.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
263.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
264.	cochrane.jw.
265.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
266.	or/46-56
267.	transluminal coronary angioplasty/ or percutaneous coronary intervention/
268.	Percutaneous coronary intervention*.ti,ab.
269.	(PPCI or PCI).ti,ab.
270.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
271.	PTCA.ti,ab.
272.	transluminal coronary angioplasty/ or percutaneous transluminal angioplasty/ or angioplasty/ or percutaneous transluminal angioplasty balloon/
273.	(Balloon adj3 coronary).ti,ab.
274.	((primary or coronary or transluminal or balloon) adj3 angioplasty).ti,ab.
275.	Coronary artery dilat*.ti,ab.
276.	or/58-66
277.	*stent/ or exp *cardiovascular stent/ or exp *drug eluting stent/ or exp *metal stent/
278.	drug eluting stent*.ti,ab.
279.	(eluting adj3 stent*).ti,ab.
280.	((paclitaxel or sirolimus or everolimus or biolimus or ridaforolimus or zotarolimus or novolimus) adj3 stent*).ti,ab.
281.	or/68-71
282.	35 and 67 and 72
283.	73 and (45 or 57)

Cochrane Library (Wiley) search terms

#96.	MeSH descriptor: [Acute Coronary Syndrome] this term only
#97.	MeSH descriptor: [Angina Pectoris] this term only

#98.	MeSH descriptor: [Angina, Unstable] this term only
#99.	MeSH descriptor: [Coronary Thrombosis] this term only
#100.	MeSH descriptor: [Myocardial Infarction] explode all trees
#101.	(or #1-#5)
#102.	MeSH descriptor: [Heart Arrest] this term only
#103.	(acute coronary near/2 syndrome*):ti,ab
#104.	((myocardial or heart) next infarct*):ti,ab
#105.	(heart next (attack* or event*)):ti,ab
#106.	((heart or cardiac) next arrest*):ti,ab
#107.	(coronary near/2 thrombos*):ti,ab
#108.	(stemi or st-segment or st segment or st-elevation or st elevation):ti,ab
#109.	non-ST-segment elevation:ti,ab
#110.	(non-STEMI or NSTEMI or nonSTEMI):ti,ab
#111.	Q wave myocardial infarction:ti,ab
#112.	non Q wave MI:ti,ab
#113.	NSTE-ACS:ti,ab
#114.	(subendocardial near/3 infarct*):ti,ab
#115.	((unstable or variant) near/2 angina*):ti,ab
#116.	(unstable near/2 coronary):ti,ab
#117.	(or #6-#21)
#118.	MeSH descriptor: [Percutaneous Coronary Intervention] explode all trees
#119.	Percutaneous coronary intervention*:ti,ab
#120.	(PPCI or PCI):ti,ab
#121.	MeSH descriptor: [Angioplasty, Balloon, Coronary] explode all trees
#122.	Percutaneous Transluminal Coronary Angioplasty:ti,ab
#123.	PTCA:ti,ab
#124.	MeSH descriptor: [Angioplasty] explode all trees
#125.	(Balloon near/3 coronary):ti,ab
#126.	((primary or coronary or transluminal or balloon) near/3 angioplasty):ti,ab
#127.	Coronary artery dilat*:ti,ab
#128.	(or #23-#32)
#129.	MeSH descriptor: [Stents] explode all trees
#130.	(drug next eluting next stent*):ti,ab
#131.	(eluting near/3 stent*):ti,ab
#132.	((paclitaxel or sirolimus) near/3 stent*):ti,ab
#133.	(or #34-#37)
#134.	#22 and #33 and #38

D.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a search relating to acute coronary syndromes population combined with terms for interventions in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA

databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase using a filter for health economics studies.

Table 8: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Embase	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - 2003 – 31 March 2018 NHSEED - 2003 to 31 March 2015	None

Medline (Ovid) search terms

334.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
335.	Heart Arrest/
336.	(acute coronary adj2 syndrome*).ti,ab.
337.	((myocardial or heart) adj infarct*).ti,ab.
338.	(heart adj (attack* or event*)).ti,ab.
339.	((heart or cardiac) adj arrest*).ti,ab.
340.	(coronary adj2 thrombos*).ti,ab.
341.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
342.	"non-ST-segment elevation".ti,ab.
343.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
344.	"Q wave myocardial infarction".ti,ab.
345.	"non Q wave MI".ti,ab.
346.	NSTE-ACS.ti,ab.
347.	(subendocardial adj3 infarct*).ti,ab.
348.	((unstable or variant) adj2 angina*).ti,ab.
349.	(unstable adj2 coronary).ti,ab.
350.	or/1-16
351.	letter/
352.	editorial/
353.	news/
354.	exp historical article/
355.	Anecdotes as Topic/
356.	comment/
357.	case report/
358.	(letter or comment*).ti.
359.	or/18-25
360.	randomized controlled trial/ or random*.ti,ab.

361.	26 not 27
362.	animals/ not humans/
363.	exp Animals, Laboratory/
364.	exp Animal Experimentation/
365.	exp Models, Animal/
366.	exp Rodentia/
367.	(rat or rats or mouse or mice).ti.
368.	or/28-34
369.	17 not 35
370.	limit 36 to English language
371.	Economics/
372.	Value of life/
373.	exp "Costs and Cost Analysis"/
374.	exp Economics, Hospital/
375.	exp Economics, Medical/
376.	Economics, Nursing/
377.	Economics, Pharmaceutical/
378.	exp "Fees and Charges"/
379.	exp Budgets/
380.	budget*.ti,ab.
381.	cost*.ti.
382.	(economic* or pharmaco?economic*).ti.
383.	(price* or pricing*).ti,ab.
384.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
385.	(financ* or fee or fees).ti,ab.
386.	(value adj2 (money or monetary)).ti,ab.
387.	or/38-53
388.	37 and 54
389.	*Angiography/
390.	Angiocardiography/
391.	Coronary Angiography/
392.	Angiograph*.ti.
393.	Arteriograph*.ti.
394.	Angiocardiograph*.ti,ab.
395.	Coronary Angiograph*.ti,ab.
396.	Angiogram*.ti,ab.
397.	Cardioangiograph*.ti,ab.
398.	Angiocardiogram.ti,ab.
399.	Angio Cardiograph*.ti,ab.
400.	Coronary Arteriogra*.ti,ab.
401.	Coronarograph*.ti,ab.
402.	*Myocardial Revascularization/

403.	Angioplasty, Balloon, Coronary/
404.	(Myocardial adj revasculari?ation).ti,ab.
405.	PCI.ti,ab.
406.	Percutaneous coronary intervention.ti,ab.
407.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
408.	PTCA.ti,ab.
409.	exp Angioplasty/
410.	Blunt microdissection.ti,ab.
411.	((laser or patch) adj angioplasty).ti,ab.
412.	Percutaneous Transluminal Angioplasty.ti,ab.
413.	Transluminal Coronary Angioplasty.ti,ab.
414.	(Balloon adj3 coronary).ti,ab.
415.	(Balloon adj3 angioplasty).ti,ab.
416.	exp STENTS/
417.	stent*.ti,ab.
418.	Or/56-84
419.	aspirin/
420.	(aspirin or acetylsalicylic acid).ti,ab.
421.	(clopidogrel or plavix).ti,ab.
422.	(ticagrelor or brilique).ti,ab.
423.	(prasugrel or efient or effient or prasita).ti,ab.
424.	Prasugrel Hydrochloride/
425.	platelet aggregation inhibitors/
426.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
427.	exp Platelet Glycoprotein GPIIb-IIIa Complex/
428.	exp Receptors, Fibrinogen/
429.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
430.	exp adrenergic beta-antagonists/
431.	(propranolol or angilol or inderal-la or half-nderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopesor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
432.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or celiprolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/
433.	(beta adj3 block*).ti,ab.
434.	(b adj3 block*).ti,ab.
435.	(beta adj2 antagonist*).ti,ab.
436.	Antithrombins/
437.	Antithrombin*.ti,ab.
438.	(thrombin adj3 inhibitor*).ti,ab.
439.	Hirudins/
440.	Hirudin*.ti,ab.
441.	Hirulog.ti,ab.

442.	Bivalirudin.ti,ab.
443.	Or/86-109
444.	55 and (85 or 110)

Embase (Ovid) search terms

319.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
320.	heart arrest/
321.	(acute coronary adj2 syndrome*).ti,ab.
322.	((myocardial or heart) adj infarct*).ti,ab.
323.	(heart adj (attack* or event*)).ti,ab.
324.	((heart or cardiac) adj arrest*).ti,ab.
325.	(coronary adj2 thrombos*).ti,ab.
326.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
327.	"non-ST-segment elevation".ti,ab.
328.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
329.	"Q wave myocardial infarction".ti,ab.
330.	"non Q wave MI".ti,ab.
331.	NSTE-ACS.ti,ab.
332.	(subendocardial adj3 infarct*).ti,ab.
333.	((unstable or variant) adj2 angina*).ti,ab.
334.	(unstable adj2 coronary).ti,ab.
335.	or/1-16
336.	letter.pt. or letter/
337.	note.pt.
338.	editorial.pt.
339.	Case report/ or Case study/
340.	(letter or comment*).ti.
341.	or/18-22
342.	randomized controlled trial/ or random*.ti,ab.
343.	23 not 24
344.	animal/ not human/
345.	Nonhuman/
346.	exp Animal Experiment/
347.	exp Experimental animal/
348.	Animal model/
349.	exp Rodent/
350.	(rat or rats or mouse or mice).ti.
351.	or/25-32
352.	17 not 33
353.	limit 34 to English language
354.	health economics/

355.	exp economic evaluation/
356.	exp health care cost/
357.	exp fee/
358.	budget/
359.	funding/
360.	budget*.ti,ab.
361.	cost*.ti.
362.	(economic* or pharmaco?economic*).ti.
363.	(price* or pricing*).ti,ab.
364.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
365.	(financ* or fee or fees).ti,ab.
366.	(value adj2 (money or monetary)).ti,ab.
367.	or/36-48
368.	35 and 49
369.	angiography/
370.	angiocardiography/
371.	coronary angiography/
372.	Angiograph*.ti.
373.	Arteriograph*.ti.
374.	Angiocardiograph*.ti,ab.
375.	Coronary Angiograph*.ti,ab.
376.	Angiogram*.ti,ab.
377.	Cardioangiograph*.ti,ab.
378.	Angiocardiogram.ti,ab.
379.	Angio Cardiograph*.ti,ab.
380.	Coronary Arteriogra*.ti,ab.
381.	Coronarograph*.ti,ab.
382.	*heart muscle revascularization/
383.	transluminal coronary angioplasty/
384.	(Myocardial adj revasculari?ation).ti,ab.
385.	PCI.ti,ab.
386.	Percutaneous coronary intervention.ti,ab.
387.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
388.	PTCA.ti,ab.
389.	*angioplasty/
390.	Blunt microdissection.ti,ab.
391.	((laser or patch) adj angioplasty).ti,ab.
392.	Percutaneous Transluminal Angioplasty.ti,ab.
393.	Transluminal Coronary Angioplasty.ti,ab.
394.	(Balloon adj3 coronary).ti,ab.

395.	(Balloon adj3 angioplasty).ti,ab.
396.	exp STENTS/
397.	stent*.ti,ab.
398.	Or/51-79
399.	acetylsalicylic acid/
400.	(aspirin or acetylsalicylic acid).ti,ab.
401.	(clopidogrel or plavix).ti,ab.
402.	(ticagrelor or briliq).ti,ab.
403.	(prasugrel or efient or effient or prasita).ti,ab.
404.	prasugrel/
405.	antithrombocytic agent/
406.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
407.	exp fibrinogen receptor/
408.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
409.	abciximab/ or eptifibatide/ or tirofiban/
410.	exp beta adrenergic receptor blocking agent/
411.	(propranolol or angilol or inderal-la or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevilobol or labetalol or trandate or metoprolol or betaloc or lopesor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
412.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or bisoprolol fumarate/ or carvedilol/ or celiprolol/ or esmolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/ or timolol maleate/
413.	(beta adj3 block*).ti,ab.
414.	(b adj3 block*).ti,ab.
415.	(beta adj2 antagonist*).ti,ab.
416.	antithrombin/
417.	Antithrombin*.ti,ab.
418.	(thrombin adj3 inhibitor*).ti,ab.
419.	hirudin derivative/
420.	Hirudin*.ti,ab.
421.	Hirulog.ti,ab.
422.	Bivalirudin.ti,ab.
423.	Or/81-104
424.	50 and (80 or 105)

NHS EED and HTA (CRD) search terms

#274.	MeSH DESCRIPTOR Acute Coronary Syndrome
#275.	(MeSH DESCRIPTOR angina pectoris)
#276.	(MeSH DESCRIPTOR Angina, Unstable)

#277.	(MeSH DESCRIPTOR Coronary Thrombosis)
#278.	MeSH DESCRIPTOR Myocardial Infarction EXPLODE ALL TREES
#279.	#1 OR #2 OR #3 OR #4 OR #5
#280.	(MeSH DESCRIPTOR Heart Arrest)
#281.	((acute coronary adj2 syndrome*))
#282.	((myocardial or heart) adj infarct*))
#283.	((heart adj (attack* or event*))
#284.	((heart or cardiac) adj arrest*))
#285.	((coronary adj2 thrombos*))
#286.	((stemi or st-segment or st segment or st-elevation or st elevation))
#287.	("non-ST-segment elevation")
#288.	((non-STEMI or NSTEMI or nonSTEMI))
#289.	("Q wave myocardial infarction")
#290.	("non Q wave MI")
#291.	(NSTE-ACS)
#292.	(STE-ACS)
#293.	((subendocardial adj3 infarct*))
#294.	((unstable or variant) adj2 angina*))
#295.	((unstable adj2 coronary))
#296.	(#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22)
#297.	(MeSH DESCRIPTOR Angiography)
#298.	(MeSH DESCRIPTOR Angiocardiology)
#299.	((MeSH DESCRIPTOR Coronary Angiography))
#300.	((Angiograph*))
#301.	((Arteriograph*))
#302.	((Angiocardiology*))
#303.	((Coronary Angiograph*))
#304.	((Angiogram*))
#305.	((Cardioangiograph*))
#306.	((Angiocardiology))
#307.	((Angio Cardiograph*))
#308.	((Coronary Arteriogra*))
#309.	((Coronarograph*))
#310.	(MeSH DESCRIPTOR Myocardial Revascularization)
#311.	(MeSH DESCRIPTOR Angioplasty, Balloon, Coronary)
#312.	((Myocardial adj revasculari?ation))
#313.	((PCI))
#314.	((Percutaneous coronary intervention))
#315.	((Percutaneous Transluminal Coronary Angioplasty))
#316.	((PTCA))
#317.	(MeSH DESCRIPTOR Angioplasty EXPLODE ALL TREES)
#318.	((Blunt microdissection))
#319.	((laser or patch) adj angioplasty))
#320.	((Percutaneous Transluminal Angioplasty))

#321.	((Transluminal Coronary Angioplasty))
#322.	((Balloon adj3 coronary))
#323.	((Balloon adj3 angioplasty))
#324.	(MeSH DESCRIPTOR Stents EXPLODE ALL TREES)
#325.	((stent*))
#326.	(#24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52)
#327.	(MeSH DESCRIPTOR Aspirin)
#328.	((aspirin or acetylsalicylic acid))
#329.	((clopidogrel or plavix))
#330.	((ticagrelor or brilique))
#331.	((prasugrel or efient or effient or prasita))
#332.	MeSH DESCRIPTOR Prasugrel Hydrochloride
#333.	MeSH DESCRIPTOR Platelet Aggregation Inhibitors
#334.	((Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA))
#335.	MeSH DESCRIPTOR Platelet Glycoprotein GPIIb-IIIa Complex EXPLODE ALL TREES
#336.	MeSH DESCRIPTOR Receptors, Fibrinogen EXPLODE ALL TREES
#337.	((Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat))
#338.	MeSH DESCRIPTOR Adrenergic beta-Antagonists EXPLODE ALL TREES
#339.	((propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or loproresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim))
#340.	(MeSH DESCRIPTOR propranolol)
#341.	(MeSH DESCRIPTOR acebutolol)
#342.	(MeSH DESCRIPTOR atenolol)
#343.	(MeSH DESCRIPTOR bisoprolol)
#344.	(MeSH DESCRIPTOR celiprolol)
#345.	(MeSH DESCRIPTOR labetalol)
#346.	(MeSH DESCRIPTOR metoprolol)
#347.	(MeSH DESCRIPTOR nadolol)
#348.	(MeSH DESCRIPTOR nebivolol)
#349.	(MeSH DESCRIPTOR oxprenolol)
#350.	(MeSH DESCRIPTOR pindolol)
#351.	(MeSH DESCRIPTOR sotalol)
#352.	(MeSH DESCRIPTOR timolol)
#353.	((beta adj3 block*))
#354.	((b adj3 block*))
#355.	((beta adj2 antagonist*))
#356.	MeSH DESCRIPTOR Antithrombins
#357.	(Antithrombin*)
#358.	((thrombin adj3 inhibitor*))

#359.	MeSH DESCRIPTOR Hirudins
#360.	(Hirudin*)
#361.	(Hirulog)
#362.	(Bivalirudin)
#363.	#54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89
#364.	(#23 AND (#53 OR #90))

Appendix E: Antithrombin therapy

Acute coronary syndromes - antithrombins

This literature search strategy was used for the following reviews;

- What is optimal choice of antithrombin therapy in adults with unstable angina or NSTEMI who are being considered for coronary angiography within 24 hours of admission?

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

E.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 9: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	01 January 2008 – 22 July 2018	Exclusions
Embase (OVID)	01 January 2008 – 22 July 2018	Exclusions
The Cochrane Library (Wiley)	Cochrane Reviews 2008 to 2019 Issue 7 of 12 CENTRAL 2008 to 2019 Issue 7 of 12 DARE, and NHSEED 2008 to 2015 Issue 2 of 4 HTA to 2008 to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

275.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
276.	Heart Arrest/
277.	(acute coronary adj2 syndrome*).ti,ab.
278.	((myocardial or heart) adj infarct*).ti,ab.
279.	(heart adj (attack* or event*)).ti,ab.
280.	((heart or cardiac) adj arrest*).ti,ab.
281.	(coronary adj2 thrombos*).ti,ab.
282.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
283.	"non-ST-segment elevation".ti,ab.
284.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
285.	"Q wave myocardial infarction".ti,ab.
286.	"non Q wave MI".ti,ab.
287.	(NSTE-ACS or STE-ACS).ti,ab.
288.	(subendocardial adj3 infarct*).ti,ab.
289.	((unstable or variant) adj2 angina*).ti,ab.
290.	(unstable adj2 coronary).ti,ab.
291.	or/1-16
292.	letter/
293.	editorial/
294.	news/
295.	exp historical article/
296.	Anecdotes as Topic/
297.	comment/
298.	case report/
299.	(letter or comment*).ti.
300.	or/18-25
301.	randomized controlled trial/ or random*.ti,ab.
302.	26 not 27
303.	animals/ not humans/
304.	exp Animals, Laboratory/
305.	exp Animal Experimentation/
306.	exp Models, Animal/
307.	exp Rodentia/
308.	(rat or rats or mouse or mice).ti.
309.	or/28-34
310.	17 not 35
311.	limit 36 to English language
312.	antithrombins/
313.	(fondaparinux or arixtra).ti,ab.
314.	38 or 39
315.	37 and 40

Embase (Ovid) search terms

284.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary
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	artery thrombosis/ or exp heart infarction/
285.	heart arrest/
286.	(acute coronary adj2 syndrome*).ti,ab.
287.	((myocardial or heart) adj infarct*).ti,ab.
288.	(heart adj (attack* or event*)).ti,ab.
289.	((heart or cardiac) adj arrest*).ti,ab.
290.	(coronary adj2 thrombos*).ti,ab.
291.	(STEMI or ST-segment or ST segment or ST-elevation or ST elevation).ti,ab.
292.	"non-ST-segment elevation".ti,ab.
293.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
294.	"Q wave myocardial infarction".ti,ab.
295.	"non Q wave MI".ti,ab.
296.	(NSTEMI-ACS or STEMI-ACS).ti,ab.
297.	(subendocardial adj3 infarct*).ti,ab.
298.	((unstable or variant) adj2 angina*).ti,ab.
299.	(unstable adj2 coronary).ti,ab.
300.	or/1-16
301.	letter.pt. or letter/
302.	note.pt.
303.	editorial.pt.
304.	Case report/ or Case study/
305.	(letter or comment*).ti.
306.	or/18-22
307.	randomized controlled trial/ or random*.ti,ab.
308.	23 not 24
309.	animal/ not human/
310.	Nonhuman/
311.	exp Animal Experiment/
312.	exp Experimental animal/
313.	Animal model/
314.	exp Rodent/
315.	(rat or rats or mouse or mice).ti.
316.	or/25-32
317.	17 not 33
318.	limit 34 to English language
319.	*antithrombin/
320.	fondaparinux/
321.	(fondaparinux or arixtra).ti,ab.
322.	36 or 37 or 38
323.	35 and 39

Cochrane Library (Wiley) search terms

#135.	MeSH descriptor: [Acute Coronary Syndrome] this term only
#136.	MeSH descriptor: [Angina Pectoris] this term only
#137.	MeSH descriptor: [Angina, Unstable] this term only
#138.	MeSH descriptor: [Coronary Thrombosis] this term only

#139.	MeSH descriptor: [Myocardial Infarction] explode all trees
#140.	(or #1-#5)
#141.	MeSH descriptor: [Heart Arrest] this term only
#142.	(acute coronary near/2 syndrome*):ti,ab
#143.	((myocardial or heart) next infarct*):ti,ab
#144.	(heart next (attack* or event*)):ti,ab
#145.	((heart or cardiac) next arrest*):ti,ab
#146.	(coronary near/2 thrombos*):ti,ab
#147.	(stemi or st-segment or st segment or st-elevation or st elevation):ti,ab
#148.	non-ST-segment elevation:ti,ab
#149.	(non-STEMI or NSTEMI or nonSTEMI):ti,ab
#150.	Q wave myocardial infarction:ti,ab
#151.	non Q wave MI:ti,ab
#152.	(NSTEMI-ACS or STE-ACS):ti,ab
#153.	(subendocardial near/3 infarct*):ti,ab
#154.	((unstable or variant) near/2 angina*):ti,ab
#155.	(unstable near/2 coronary):ti,ab
#156.	(or #6-#21)
#157.	MeSH descriptor: [Antithrombins] explode all trees
#158.	(fondaparinux or arixtra).ti,ab
#159.	#23 or #24
#160.	#22 and #25

E.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a search relating to acute coronary syndromes population combined with terms for interventions in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase using a filter for health economics studies.

Table 10: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Embase	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - 2003 – 31 March 2018 NHSEED - 2003 to 31 March 2015	None

Medline (Ovid) search terms

445.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
446.	Heart Arrest/

447.	(acute coronary adj2 syndrome*).ti,ab.
448.	((myocardial or heart) adj infarct*).ti,ab.
449.	(heart adj (attack* or event*)).ti,ab.
450.	((heart or cardiac) adj arrest*).ti,ab.
451.	(coronary adj2 thrombos*).ti,ab.
452.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
453.	"non-ST-segment elevation".ti,ab.
454.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
455.	"Q wave myocardial infarction".ti,ab.
456.	"non Q wave MI".ti,ab.
457.	NSTE-ACS.ti,ab.
458.	(subendocardial adj3 infarct*).ti,ab.
459.	((unstable or variant) adj2 angina*).ti,ab.
460.	(unstable adj2 coronary).ti,ab.
461.	or/1-16
462.	letter/
463.	editorial/
464.	news/
465.	exp historical article/
466.	Anecdotes as Topic/
467.	comment/
468.	case report/
469.	(letter or comment*).ti.
470.	or/18-25
471.	randomized controlled trial/ or random*.ti,ab.
472.	26 not 27
473.	animals/ not humans/
474.	exp Animals, Laboratory/
475.	exp Animal Experimentation/
476.	exp Models, Animal/
477.	exp Rodentia/
478.	(rat or rats or mouse or mice).ti.
479.	or/28-34
480.	17 not 35
481.	limit 36 to English language
482.	Economics/
483.	Value of life/
484.	exp "Costs and Cost Analysis"/
485.	exp Economics, Hospital/
486.	exp Economics, Medical/

487.	Economics, Nursing/
488.	Economics, Pharmaceutical/
489.	exp "Fees and Charges"/
490.	exp Budgets/
491.	budget*.ti,ab.
492.	cost*.ti.
493.	(economic* or pharmaco?economic*).ti.
494.	(price* or pricing*).ti,ab.
495.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
496.	(financ* or fee or fees).ti,ab.
497.	(value adj2 (money or monetary)).ti,ab.
498.	or/38-53
499.	37 and 54
500.	*Angiography/
501.	Angiocardiography/
502.	Coronary Angiography/
503.	Angiograph*.ti.
504.	Arteriograph*.ti.
505.	Angiocardiograph*.ti,ab.
506.	Coronary Angiograph*.ti,ab.
507.	Angiogram*.ti,ab.
508.	Cardioangiograph*.ti,ab.
509.	Angiocardiogram.ti,ab.
510.	Angio Cardiograph*.ti,ab.
511.	Coronary Arteriogra*.ti,ab.
512.	Coronarograph*.ti,ab.
513.	*Myocardial Revascularization/
514.	Angioplasty, Balloon, Coronary/
515.	(Myocardial adj revasculari?ation).ti,ab.
516.	PCI.ti,ab.
517.	Percutaneous coronary intervention.ti,ab.
518.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
519.	PTCA.ti,ab.
520.	exp Angioplasty/
521.	Blunt microdissection.ti,ab.
522.	((laser or patch) adj angioplasty).ti,ab.
523.	Percutaneous Transluminal Angioplasty.ti,ab.
524.	Transluminal Coronary Angioplasty.ti,ab.
525.	(Balloon adj3 coronary).ti,ab.
526.	(Balloon adj3 angioplasty).ti,ab.
527.	exp STENTS/
528.	stent*.ti,ab.
529.	Or/56-84

530.	aspirin/
531.	(aspirin or acetylsalicylic acid).ti,ab.
532.	(clopidogrel or plavix).ti,ab.
533.	(ticagrelor or brilique).ti,ab.
534.	(prasugrel or efient or effient or prasita).ti,ab.
535.	Prasugrel Hydrochloride/
536.	platelet aggregation inhibitors/
537.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphaIIbbeta3 or GPIIB IIIA).ti,ab.
538.	exp Platelet Glycoprotein GPIIb-IIIa Complex/
539.	exp Receptors, Fibrinogen/
540.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
541.	exp adrenergic beta-antagonists/
542.	(propranolol or angilol or inderal-la or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
543.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or celiprolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/
544.	(beta adj3 block*).ti,ab.
545.	(b adj3 block*).ti,ab.
546.	(beta adj2 antagonist*).ti,ab.
547.	Antithrombins/
548.	Antithrombin*.ti,ab.
549.	(thrombin adj3 inhibitor*).ti,ab.
550.	Hirudins/
551.	Hirudin*.ti,ab.
552.	Hirulog.ti,ab.
553.	Bivalirudin.ti,ab.
554.	Or/86-109
555.	55 and (85 or 110)

Embase (Ovid) search terms

425.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
426.	heart arrest/
427.	(acute coronary adj2 syndrome*).ti,ab.
428.	((myocardial or heart) adj infarct*).ti,ab.
429.	(heart adj (attack* or event*)).ti,ab.
430.	((heart or cardiac) adj arrest*).ti,ab.
431.	(coronary adj2 thrombos*).ti,ab.
432.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
433.	"non-ST-segment elevation".ti,ab.

434.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
435.	"Q wave myocardial infarction".ti,ab.
436.	"non Q wave MI".ti,ab.
437.	NSTE-ACS.ti,ab.
438.	(subendocardial adj3 infarct*).ti,ab.
439.	((unstable or variant) adj2 angina*).ti,ab.
440.	(unstable adj2 coronary).ti,ab.
441.	or/1-16
442.	letter.pt. or letter/
443.	note.pt.
444.	editorial.pt.
445.	Case report/ or Case study/
446.	(letter or comment*).ti.
447.	or/18-22
448.	randomized controlled trial/ or random*.ti,ab.
449.	23 not 24
450.	animal/ not human/
451.	Nonhuman/
452.	exp Animal Experiment/
453.	exp Experimental animal/
454.	Animal model/
455.	exp Rodent/
456.	(rat or rats or mouse or mice).ti.
457.	or/25-32
458.	17 not 33
459.	limit 34 to English language
460.	health economics/
461.	exp economic evaluation/
462.	exp health care cost/
463.	exp fee/
464.	budget/
465.	funding/
466.	budget*.ti,ab.
467.	cost*.ti.
468.	(economic* or pharmaco?economic*).ti.
469.	(price* or pricing*).ti,ab.
470.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.

471.	(financ* or fee or fees).ti,ab.
472.	(value adj2 (money or monetary)).ti,ab.
473.	or/36-48
474.	35 and 49
475.	angiography/
476.	angiocardiography/
477.	coronary angiography/
478.	Angiograph*.ti.
479.	Arteriograph*.ti.
480.	Angiocardiograph*.ti,ab.
481.	Coronary Angiograph*.ti,ab.
482.	Angiogram*.ti,ab.
483.	Cardioangiograph*.ti,ab.
484.	Angiocardiogram.ti,ab.
485.	Angio Cardiograph*.ti,ab.
486.	Coronary Arteriogra*.ti,ab.
487.	Coronarograph*.ti,ab.
488.	*heart muscle revascularization/
489.	transluminal coronary angioplasty/
490.	(Myocardial adj revasculari?ation).ti,ab.
491.	PCI.ti,ab.
492.	Percutaneous coronary intervention.ti,ab.
493.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
494.	PTCA.ti,ab.
495.	*angioplasty/
496.	Blunt microdissection.ti,ab.
497.	((laser or patch) adj angioplasty).ti,ab.
498.	Percutaneous Transluminal Angioplasty.ti,ab.
499.	Transluminal Coronary Angioplasty.ti,ab.
500.	(Balloon adj3 coronary).ti,ab.
501.	(Balloon adj3 angioplasty).ti,ab.
502.	exp STENTS/
503.	stent*.ti,ab.
504.	Or/51-79
505.	acetylsalicylic acid/
506.	(aspirin or acetylsalicylic acid).ti,ab.
507.	(clopidogrel or plavix).ti,ab.

508.	(ticagrelor or brilique).ti,ab.
509.	(prasugrel or efient or effient or prasita).ti,ab.
510.	prasugrel/
511.	antithrombocytic agent/
512.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphasIIb beta3 or GPIIB IIIA).ti,ab.
513.	exp fibrinogen receptor/
514.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
515.	abciximab/ or eptifibatide/ or tirofiban/
516.	exp beta adrenergic receptor blocking agent/
517.	(propranolol or angilol or inderal-la or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
518.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or bisoprolol fumarate/ or carvedilol/ or celiprolol/ or esmolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/ or timolol maleate/
519.	(beta adj3 block*).ti,ab.
520.	(b adj3 block*).ti,ab.
521.	(beta adj2 antagonist*).ti,ab.
522.	antithrombin/
523.	Antithrombin*.ti,ab.
524.	(thrombin adj3 inhibitor*).ti,ab.
525.	hirudin derivative/
526.	Hirudin*.ti,ab.
527.	Hirulog.ti,ab.
528.	Bivalirudin.ti,ab.
529.	Or/81-104
530.	50 and (80 or 105)

NHS EED and HTA (CRD) search terms

#365.	MeSH DESCRIPTOR Acute Coronary Syndrome
#366.	(MeSH DESCRIPTOR angina pectoris)
#367.	(MeSH DESCRIPTOR Angina, Unstable)
#368.	(MeSH DESCRIPTOR Coronary Thrombosis)
#369.	MeSH DESCRIPTOR Myocardial Infarction EXPLODE ALL TREES
#370.	#1 OR #2 OR #3 OR #4 OR #5
#371.	(MeSH DESCRIPTOR Heart Arrest)
#372.	((acute coronary adj2 syndrome*))
#373.	((((myocardial or heart) adj infarct*))

#374.	((heart adj (attack* or event*)))
#375.	((heart or cardiac) adj arrest*)
#376.	((coronary adj2 thrombos*))
#377.	((stemi or st-segment or st segment or st-elevation or st elevation))
#378.	("non-ST-segment elevation")
#379.	((non-STEMI or NSTEMI or nonSTEMI))
#380.	("Q wave myocardial infarction")
#381.	("non Q wave MI")
#382.	(NSTE-ACS)
#383.	(STE-ACS)
#384.	((subendocardial adj3 infarct*))
#385.	((unstable or variant) adj2 angina*))
#386.	((unstable adj2 coronary))
#387.	(#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22)
#388.	(MeSH DESCRIPTOR Angiography)
#389.	(MeSH DESCRIPTOR Angiocardiography)
#390.	((MeSH DESCRIPTOR Coronary Angiography))
#391.	((Angiograph*))
#392.	((Arteriograph*))
#393.	((Angiocardiograph*))
#394.	((Coronary Angiograph*))
#395.	((Angiogram*))
#396.	((Cardioangiograph*))
#397.	((Angiocardiogram))
#398.	((Angio Cardiograph*))
#399.	((Coronary Arteriogra*))
#400.	((Coronarograph*))
#401.	(MeSH DESCRIPTOR Myocardial Revascularization)
#402.	(MeSH DESCRIPTOR Angioplasty, Balloon, Coronary)
#403.	((Myocardial adj revasculari?ation))
#404.	((PCI))
#405.	((Percutaneous coronary intervention))
#406.	((Percutaneous Transluminal Coronary Angioplasty))
#407.	((PTCA))
#408.	(MeSH DESCRIPTOR Angioplasty EXPLODE ALL TREES)
#409.	((Blunt microdissection))
#410.	((laser or patch) adj angioplasty))
#411.	((Percutaneous Transluminal Angioplasty))
#412.	((Transluminal Coronary Angioplasty))
#413.	((Balloon adj3 coronary))
#414.	((Balloon adj3 angioplasty))
#415.	(MeSH DESCRIPTOR Stents EXPLODE ALL TREES)
#416.	((stent*))
#417.	(#24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR

	#44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52)
#418.	(MeSH DESCRIPTOR Aspirin)
#419.	((aspirin or acetylsalicylic acid))
#420.	((clopidogrel or plavix))
#421.	((ticagrelor or brilique))
#422.	((prasugrel or efient or effient or prasita))
#423.	MeSH DESCRIPTOR Prasugrel Hydrochloride
#424.	MeSH DESCRIPTOR Platelet Aggregation Inhibitors
#425.	((Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphaIIbbeta3 or GPIIB IIIA))
#426.	MeSH DESCRIPTOR Platelet Glycoprotein GPIIb-IIIa Complex EXPLODE ALL TREES
#427.	MeSH DESCRIPTOR Receptors, Fibrinogen EXPLODE ALL TREES
#428.	((Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat))
#429.	MeSH DESCRIPTOR Adrenergic beta-Antagonists EXPLODE ALL TREES
#430.	((propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or breviploc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim))
#431.	(MeSH DESCRIPTOR propranolol)
#432.	(MeSH DESCRIPTOR acebutolol)
#433.	(MeSH DESCRIPTOR atenolol)
#434.	(MeSH DESCRIPTOR bisoprolol)
#435.	(MeSH DESCRIPTOR celiprolol)
#436.	(MeSH DESCRIPTOR labetalol)
#437.	(MeSH DESCRIPTOR metoprolol)
#438.	(MeSH DESCRIPTOR nadolol)
#439.	(MeSH DESCRIPTOR nebivolol)
#440.	(MeSH DESCRIPTOR oxprenolol)
#441.	(MeSH DESCRIPTOR pindolol)
#442.	(MeSH DESCRIPTOR sotalol)
#443.	(MeSH DESCRIPTOR timolol)
#444.	((beta adj3 block*))
#445.	((b adj3 block*))
#446.	((beta adj2 antagonist*))
#447.	MeSH DESCRIPTOR Anti-thrombins
#448.	(Antithrombin*)
#449.	((thrombin adj3 inhibitor*))
#450.	MeSH DESCRIPTOR Hirudins
#451.	(Hirudin*)
#452.	(Hirulog)
#453.	(Bivalirudin)
#454.	#54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR

	#84 OR #85 OR #86 OR #87 OR #88 OR #89
#455.	(#23 AND (#53 OR #90))

Appendix F: Early angiography or conservative management

Acute coronary syndromes search strategy – early angiography

This literature search strategy was used for the following reviews;

- In adults with UA or non-ST elevation MI does early routine invasive investigation (i.e. angiography) with intent to assess for (and in those patients deemed suitable, to perform) revascularization improve outcomes in comparison with conservative or selective treatment, with or without later angiography?

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

F.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 11: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	01 January 2008– 19 June 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	01 January 2008 – 19 June 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews 2008 to 2019 Issue 6 of 12 CENTRAL 2008 to 2019 Issue 6 of 12 DARE, and NHSEED 2008 to 2015 Issue 2 of 4 HTA to 2008 to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

316.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
317.	Heart Arrest/

318.	(acute coronary adj2 syndrome*).ti,ab.
319.	((myocardial or heart) adj infarct*).ti,ab.
320.	(heart adj (attack* or event*)).ti,ab.
321.	((heart or cardiac) adj arrest*).ti,ab.
322.	(coronary adj2 thrombos*).ti,ab.
323.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
324.	"non-ST-segment elevation".ti,ab.
325.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
326.	"Q wave myocardial infarction".ti,ab.
327.	"non Q wave MI".ti,ab.
328.	(NSTEMI-ACS or STE-ACS).ti,ab.
329.	(subendocardial adj3 infarct*).ti,ab.
330.	((unstable or variant) adj2 angina*).ti,ab.
331.	(unstable adj2 coronary).ti,ab.
332.	or/1-16
333.	letter/
334.	editorial/
335.	news/
336.	exp historical article/
337.	Anecdotes as Topic/
338.	comment/
339.	case report/
340.	(letter or comment*).ti.
341.	or/18-25
342.	randomized controlled trial/ or random*.ti,ab.
343.	26 not 27
344.	animals/ not humans/
345.	exp Animals, Laboratory/
346.	exp Animal Experimentation/
347.	exp Models, Animal/
348.	exp Rodentia/
349.	(rat or rats or mouse or mice).ti.
350.	or/28-34
351.	or/1-7,9-16
352.	36 not 35
353.	limit 37 to English language
354.	randomized controlled trial.pt.
355.	controlled clinical trial.pt.
356.	randomi#ed.ti,ab.
357.	placebo.ab.
358.	randomly.ti,ab.
359.	Clinical Trials as topic.sh.
360.	trial.ti.
361.	or/39-45
362.	Meta-Analysis/

363.	exp Meta-Analysis as Topic/
364.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
365.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
366.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
367.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
368.	(search* adj4 literature).ab.
369.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
370.	cochrane.jw.
371.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
372.	or/47-56
373.	46 or 57
374.	38 and 58
375.	(interven* adj2 (strateg* or therap* or treatment* or management)).ti,ab.
376.	(conservative adj2 (strateg* or therap* or treatment* or management)).ti,ab.
377.	(invasive adj2 (strateg* or therap* or treatment* or management*)).ti,ab.
378.	(early adj2 invasive).ti,ab.
379.	(isch?emi* adj4 (guid* or strateg*)).ti,ab.
380.	(invasive adj4 conservative).ti,ab.
381.	(angiograph* adj4 (invasive or conservative)).ti,ab.
382.	(triage adj4 angiograph*).ti,ab.
383.	or/60-67
384.	59 and 68

Embase (Ovid) search terms

324.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
325.	heart arrest/
326.	(acute coronary adj2 syndrome*).ti,ab.
327.	((myocardial or heart) adj infarct*).ti,ab.
328.	(heart adj (attack* or event*)).ti,ab.
329.	((heart or cardiac) adj arrest*).ti,ab.
330.	(coronary adj2 thrombos*).ti,ab.
331.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
332.	"non-ST-segment elevation".ti,ab.
333.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
334.	"Q wave myocardial infarction".ti,ab.
335.	"non Q wave MI".ti,ab.
336.	(NSTE-ACS or STE-ACS).ti,ab.
337.	(subendocardial adj3 infarct*).ti,ab.
338.	((unstable or variant) adj2 angina*).ti,ab.
339.	(unstable adj2 coronary).ti,ab.
340.	or/1-16
341.	letter.pt. or letter/
342.	note.pt.

343.	editorial.pt.
344.	Case report/ or Case study/
345.	(letter or comment*).ti.
346.	or/18-22
347.	randomized controlled trial/ or random*.ti,ab.
348.	23 not 24
349.	animal/ not human/
350.	Nonhuman/
351.	exp Animal Experiment/
352.	exp Experimental animal/
353.	Animal model/
354.	exp Rodent/
355.	(rat or rats or mouse or mice).ti.
356.	or/25-32
357.	or/1-7,9-16
358.	random*.ti,ab.
359.	factorial*.ti,ab.
360.	(crossover* or cross over*).ti,ab.
361.	((doubl* or singl*) adj blind*).ti,ab.
362.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
363.	crossover procedure/
364.	single blind procedure/
365.	randomized controlled trial/
366.	double blind procedure/
367.	or/35-43
368.	systematic review/
369.	meta-analysis/
370.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
371.	((systematic or evidence) adj3 (review* or overview*)).ti,ab.
372.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
373.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
374.	(search* adj4 literature).ab.
375.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
376.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
377.	cochrane.jw.
378.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
379.	or/45-55
380.	34 not 33
381.	limit 57 to English language
382.	44 or 56
383.	58 and 59
384.	(interven* adj2 (strateg* or therap* or treatment* or management)).ti,ab.
385.	(conservative adj2 (strateg* or therap* or treatment* or management)).ti,ab.

386.	(invasive adj2 (strateg* or therap* or treatment* or management*)):ti,ab.
387.	(early adj2 invasive):ti,ab.
388.	(isch?emi* adj4 (guid* or strateg*)):ti,ab.
389.	(invasive adj4 conservative):ti,ab.
390.	(angiograph* adj4 (invasive or conservative)):ti,ab.
391.	(triage adj4 angiograph*):ti,ab.
392.	or/61-68
393.	60 and 69

Cochrane Library (Wiley) search terms

#161.	MeSH descriptor: [Acute Coronary Syndrome] this term only
#162.	MeSH descriptor: [Angina Pectoris] this term only
#163.	MeSH descriptor: [Angina, Unstable] this term only
#164.	MeSH descriptor: [Coronary Thrombosis] this term only
#165.	MeSH descriptor: [Myocardial Infarction] explode all trees
#166.	(or #1-#5)
#167.	MeSH descriptor: [Heart Arrest] this term only
#168.	(acute coronary near/2 syndrome*):ti,ab
#169.	((myocardial or heart) next infarct*):ti,ab
#170.	(heart next (attack* or event*)):ti,ab
#171.	((heart or cardiac) next arrest*):ti,ab
#172.	(coronary near/2 thrombos*):ti,ab
#173.	(stemi or st-segment or st segment or st-elevation or st elevation):ti,ab
#174.	non-ST-segment elevation:ti,ab
#175.	(non-STEMI or NSTEMI or nonSTEMI):ti,ab
#176.	Q wave myocardial infarction:ti,ab
#177.	non Q wave MI:ti,ab
#178.	(NSTEMI-ACS or STE-ACS):ti,ab
#179.	(subendocardial near/3 infarct*):ti,ab
#180.	((unstable or variant) near/2 angina*):ti,ab
#181.	(unstable near/2 coronary):ti,ab
#182.	(or #6-#12)
#183.	(or #14-#21)
#184.	#22 or #23
#185.	(interven* near/6 (strateg* or therap* or treatment* or management)):ti,ab
#186.	(conservative near/6 (strateg* or therap* or treatment* or management)):ti,ab
#187.	(invasive near/6 (strateg* or therap* or treatment* or management)):ti,ab
#188.	((ischaemi* or ischemi*) near/6 (guid* or strateg*)):ti,ab
#189.	(early near/6 invasive):ti,ab
#190.	(invasive near/6 conservative):ti,ab
#191.	(angiograph* near/6 (invasive or conservative)):ti,ab
#192.	(triage near/6 angiograph*):ti,ab
#193.	(or #25-#32)
#194.	#24 and #33

F.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a search relating to acute coronary syndromes population combined with terms for interventions in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase using a filter for health economics studies.

Table 12: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Embase	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - 2003 – 31 March 2018 NHSEED - 2003 to 31 March 2015	None

Medline (Ovid) search terms

556.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
557.	Heart Arrest/
558.	(acute coronary adj2 syndrome*).ti,ab.
559.	((myocardial or heart) adj infarct*).ti,ab.
560.	(heart adj (attack* or event*)).ti,ab.
561.	((heart or cardiac) adj arrest*).ti,ab.
562.	(coronary adj2 thrombos*).ti,ab.
563.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
564.	"non-ST-segment elevation".ti,ab.
565.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
566.	"Q wave myocardial infarction".ti,ab.
567.	"non Q wave MI".ti,ab.
568.	NSTE-ACS.ti,ab.
569.	(subendocardial adj3 infarct*).ti,ab.
570.	((unstable or variant) adj2 angina*).ti,ab.
571.	(unstable adj2 coronary).ti,ab.
572.	or/1-16
573.	letter/
574.	editorial/
575.	news/
576.	exp historical article/
577.	Anecdotes as Topic/

578.	comment/
579.	case report/
580.	(letter or comment*).ti.
581.	or/18-25
582.	randomized controlled trial/ or random*.ti,ab.
583.	26 not 27
584.	animals/ not humans/
585.	exp Animals, Laboratory/
586.	exp Animal Experimentation/
587.	exp Models, Animal/
588.	exp Rodentia/
589.	(rat or rats or mouse or mice).ti.
590.	or/28-34
591.	17 not 35
592.	limit 36 to English language
593.	Economics/
594.	Value of life/
595.	exp "Costs and Cost Analysis"/
596.	exp Economics, Hospital/
597.	exp Economics, Medical/
598.	Economics, Nursing/
599.	Economics, Pharmaceutical/
600.	exp "Fees and Charges"/
601.	exp Budgets/
602.	budget*.ti,ab.
603.	cost*.ti.
604.	(economic* or pharmaco?economic*).ti.
605.	(price* or pricing*).ti,ab.
606.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
607.	(financ* or fee or fees).ti,ab.
608.	(value adj2 (money or monetary)).ti,ab.
609.	or/38-53
610.	37 and 54
611.	*Angiography/
612.	Angiocardiography/
613.	Coronary Angiography/
614.	Angiograph*.ti.
615.	Arteriograph*.ti.
616.	Angiocardiograph*.ti,ab.
617.	Coronary Angiograph*.ti,ab.
618.	Angiogram*.ti,ab.

619.	Cardioangiograph*.ti,ab.
620.	Angiocardiogram.ti,ab.
621.	Angio Cardiograph*.ti,ab.
622.	Coronary Arteriogra*.ti,ab.
623.	Coronarograph*.ti,ab.
624.	*Myocardial Revascularization/
625.	Angioplasty, Balloon, Coronary/
626.	(Myocardial adj revasculari?ation).ti,ab.
627.	PCI.ti,ab.
628.	Percutaneous coronary intervention.ti,ab.
629.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
630.	PTCA.ti,ab.
631.	exp Angioplasty/
632.	Blunt microdissection.ti,ab.
633.	((laser or patch) adj angioplasty).ti,ab.
634.	Percutaneous Transluminal Angioplasty.ti,ab.
635.	Transluminal Coronary Angioplasty.ti,ab.
636.	(Balloon adj3 coronary).ti,ab.
637.	(Balloon adj3 angioplasty).ti,ab.
638.	exp STENTS/
639.	stent*.ti,ab.
640.	Or/56-84
641.	aspirin/
642.	(aspirin or acetylsalicylic acid).ti,ab.
643.	(clopidogrel or plavix).ti,ab.
644.	(ticagrelor or brilique).ti,ab.
645.	(prasugrel or efient or effient or prasita).ti,ab.
646.	Prasugrel Hydrochloride/
647.	platelet aggregation inhibitors/
648.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
649.	exp Platelet Glycoprotein GPIIb-IIIa Complex/
650.	exp Receptors, Fibrinogen/
651.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
652.	exp adrenergic beta-antagonists/
653.	(propranolol or angilol or inderal-la or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or loproresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
654.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or celiprolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/
655.	(beta adj3 block*).ti,ab.
656.	(b adj3 block*).ti,ab.
657.	(beta adj2 antagonist*).ti,ab.

658.	Antithrombins/
659.	Antithrombin*.ti,ab.
660.	(thrombin adj3 inhibitor*).ti,ab.
661.	Hirudins/
662.	Hirudin*.ti,ab.
663.	Hirulog.ti,ab.
664.	Bivalirudin.ti,ab.
665.	Or/86-109
666.	55 and (85 or 110)

Embase (Ovid) search terms

531.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
532.	heart arrest/
533.	(acute coronary adj2 syndrome*).ti,ab.
534.	((myocardial or heart) adj infarct*).ti,ab.
535.	(heart adj (attack* or event*)).ti,ab.
536.	((heart or cardiac) adj arrest*).ti,ab.
537.	(coronary adj2 thrombos*).ti,ab.
538.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
539.	"non-ST-segment elevation".ti,ab.
540.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
541.	"Q wave myocardial infarction".ti,ab.
542.	"non Q wave MI".ti,ab.
543.	NSTE-ACS.ti,ab.
544.	(subendocardial adj3 infarct*).ti,ab.
545.	((unstable or variant) adj2 angina*).ti,ab.
546.	(unstable adj2 coronary).ti,ab.
547.	or/1-16
548.	letter.pt. or letter/
549.	note.pt.
550.	editorial.pt.
551.	Case report/ or Case study/
552.	(letter or comment*).ti.
553.	or/18-22
554.	randomized controlled trial/ or random*.ti,ab.
555.	23 not 24
556.	animal/ not human/
557.	Nonhuman/
558.	exp Animal Experiment/
559.	exp Experimental animal/
560.	Animal model/

561.	exp Rodent/
562.	(rat or rats or mouse or mice).ti.
563.	or/25-32
564.	17 not 33
565.	limit 34 to English language
566.	health economics/
567.	exp economic evaluation/
568.	exp health care cost/
569.	exp fee/
570.	budget/
571.	funding/
572.	budget*.ti,ab.
573.	cost*.ti.
574.	(economic* or pharmaco?economic*).ti.
575.	(price* or pricing*).ti,ab.
576.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)),ab.
577.	(financ* or fee or fees).ti,ab.
578.	(value adj2 (money or monetary)).ti,ab.
579.	or/36-48
580.	35 and 49
581.	angiography/
582.	angiocardiography/
583.	coronary angiography/
584.	Angiograph*.ti.
585.	Arteriograph*.ti.
586.	Angiocardiograph*.ti,ab.
587.	Coronary Angiograph*.ti,ab.
588.	Angiogram*.ti,ab.
589.	Cardioangiograph*.ti,ab.
590.	Angiocardiogram.ti,ab.
591.	Angio Cardiograph*.ti,ab.
592.	Coronary Arteriogra*.ti,ab.
593.	Coronarograph*.ti,ab.
594.	*heart muscle revascularization/
595.	transluminal coronary angioplasty/
596.	(Myocardial adj revasculari?ation).ti,ab.
597.	PCI.ti,ab.
598.	Percutaneous coronary intervention.ti,ab.
599.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
600.	PTCA.ti,ab.

601.	*angioplasty/
602.	Blunt microdissection.ti,ab.
603.	((laser or patch) adj angioplasty).ti,ab.
604.	Percutaneous Transluminal Angioplasty.ti,ab.
605.	Transluminal Coronary Angioplasty.ti,ab.
606.	(Balloon adj3 coronary).ti,ab.
607.	(Balloon adj3 angioplasty).ti,ab.
608.	exp STENTS/
609.	stent*.ti,ab.
610.	Or/51-79
611.	acetylsalicylic acid/
612.	(aspirin or acetylsalicylic acid).ti,ab.
613.	(clopidogrel or plavix).ti,ab.
614.	(ticagrelor or brilique).ti,ab.
615.	(prasugrel or efient or effient or prasita).ti,ab.
616.	prasugrel/
617.	antithrombocytic agent/
618.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphaIIb beta3 or GPIIB IIIA).ti,ab.
619.	exp fibrinogen receptor/
620.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
621.	abciximab/ or eptifibatide/ or tirofiban/
622.	exp beta adrenergic receptor blocking agent/
623.	(propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
624.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or bisoprolol fumarate/ or carvedilol/ or celiprolol/ or esmolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/ or timolol maleate/
625.	(beta adj3 block*).ti,ab.
626.	(b adj3 block*).ti,ab.
627.	(beta adj2 antagonist*).ti,ab.
628.	antithrombin/
629.	Antithrombin*.ti,ab.
630.	(thrombin adj3 inhibitor*).ti,ab.
631.	hirudin derivative/
632.	Hirudin*.ti,ab.
633.	Hirulog.ti,ab.
634.	Bivalirudin.ti,ab.

635.	Or/81-104
636.	50 and (80 or 105)

NHS EED and HTA (CRD) search terms

#456.	MeSH DESCRIPTOR Acute Coronary Syndrome
#457.	(MeSH DESCRIPTOR angina pectoris)
#458.	(MeSH DESCRIPTOR Angina, Unstable)
#459.	(MeSH DESCRIPTOR Coronary Thrombosis)
#460.	MeSH DESCRIPTOR Myocardial Infarction EXPLODE ALL TREES
#461.	#1 OR #2 OR #3 OR #4 OR #5
#462.	(MeSH DESCRIPTOR Heart Arrest)
#463.	((acute coronary adj2 syndrome*))
#464.	((myocardial or heart) adj infarct*))
#465.	((heart adj (attack* or event*)))
#466.	((heart or cardiac) adj arrest*))
#467.	((coronary adj2 thrombos*))
#468.	((stemi or st-segment or st segment or st-elevation or st elevation))
#469.	("non-ST-segment elevation")
#470.	((non-STEMI or NSTEMI or nonSTEMI))
#471.	("Q wave myocardial infarction")
#472.	("non Q wave MI")
#473.	(NSTE-ACS)
#474.	(STE-ACS)
#475.	((subendocardial adj3 infarct*))
#476.	((unstable or variant) adj2 angina*))
#477.	((unstable adj2 coronary))
#478.	(#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22)
#479.	(MeSH DESCRIPTOR Angiography)
#480.	(MeSH DESCRIPTOR Angiocardiography)
#481.	((MeSH DESCRIPTOR Coronary Angiography))
#482.	((Angiograph*))
#483.	((Arteriograph*))
#484.	((Angiocardiograph*))
#485.	((Coronary Angiograph*))
#486.	((Angiogram*))
#487.	((Cardioangiograph*))
#488.	((Angiocardiogram))
#489.	((Angio Cardiograph*))
#490.	((Coronary Arteriogra*))
#491.	((Coronarograph*))
#492.	(MeSH DESCRIPTOR Myocardial Revascularization)
#493.	(MeSH DESCRIPTOR Angioplasty, Balloon, Coronary)
#494.	((Myocardial adj revasculari?ation))
#495.	((PCI))
#496.	((Percutaneous coronary intervention))

#497.	((Percutaneous Transluminal Coronary Angioplasty))
#498.	((PTCA))
#499.	(MeSH DESCRIPTOR Angioplasty EXPLODE ALL TREES)
#500.	((Blunt microdissection))
#501.	(((((laser or patch) adj angioplasty)))
#502.	((Percutaneous Transluminal Angioplasty))
#503.	((Transluminal Coronary Angioplasty))
#504.	((((Balloon adj3 coronary)))
#505.	((Balloon adj3 angioplasty))
#506.	(MeSH DESCRIPTOR Stents EXPLODE ALL TREES)
#507.	((stent*))
#508.	(#24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52)
#509.	(MeSH DESCRIPTOR Aspirin)
#510.	((aspirin or acetylsalicylic acid))
#511.	((clopidogrel or plavix))
#512.	((ticagrelor or brilique))
#513.	((prasugrel or efiel or efiel or prasita))
#514.	MeSH DESCRIPTOR Prasugrel Hydrochloride
#515.	MeSH DESCRIPTOR Platelet Aggregation Inhibitors
#516.	((Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphaIIb beta3 or GPIIB IIIA))
#517.	MeSH DESCRIPTOR Platelet Glycoprotein GPIIb-IIIa Complex EXPLODE ALL TREES
#518.	MeSH DESCRIPTOR Receptors, Fibrinogen EXPLODE ALL TREES
#519.	((Abciximab or Reopro or Eptifibatid or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat))
#520.	MeSH DESCRIPTOR Adrenergic beta-Antagonists EXPLODE ALL TREES
#521.	((propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevilobol or labetalol or trandate or metoprolol or betaloc or loproser or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim))
#522.	(MeSH DESCRIPTOR propranolol)
#523.	(MeSH DESCRIPTOR acebutolol)
#524.	(MeSH DESCRIPTOR atenolol)
#525.	(MeSH DESCRIPTOR bisoprolol)
#526.	(MeSH DESCRIPTOR celiprolol)
#527.	(MeSH DESCRIPTOR labetalol)
#528.	(MeSH DESCRIPTOR metoprolol)
#529.	(MeSH DESCRIPTOR nadolol)
#530.	(MeSH DESCRIPTOR nebivolol)
#531.	(MeSH DESCRIPTOR oxprenolol)
#532.	(MeSH DESCRIPTOR pindolol)
#533.	(MeSH DESCRIPTOR sotalol)
#534.	(MeSH DESCRIPTOR timolol)

#535.	((beta adj3 block*))
#536.	((b adj3 block*))
#537.	((beta adj2 antagonist*))
#538.	MeSH DESCRIPTOR Antithrombins
#539.	(Antithrombin*)
#540.	((thrombin adj3 inhibitor*))
#541.	MeSH DESCRIPTOR Hirudins
#542.	(Hirudin*)
#543.	(Hirulog)
#544.	(Bivalirudin)
#545.	#54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89
#546.	(#23 AND (#53 OR #90))

Appendix G: Combination therapy

Acute coronary syndromes search strategy – combination therapy

This literature search strategy was used for the following reviews;

- What is the most clinically and cost effective combination of antiplatelet and anticoagulant therapies for people who have had an ACS and a separate indication for anticoagulation?

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2018}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

G.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 13: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	01 January 2008 – 22 July 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	01 January 2008 – 22 July 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews 2008 to	None

Database	Dates searched	Search filter used
	2019 Issue 7 of 12 CENTRAL 2008 to 2019 Issue 7 of 12 DARE, and NHSEED 2008 to 2015 Issue 2 of 4 HTA to 2008 to 2016 Issue 4 of 4	

Medline (Ovid) search terms

385.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
386.	Heart Arrest/
387.	(acute coronary adj2 syndrome*).ti,ab.
388.	((myocardial or heart) adj infarct*).ti,ab.
389.	(heart adj (attack* or event*)).ti,ab.
390.	((heart or cardiac) adj arrest*).ti,ab.
391.	(coronary adj2 thrombos*).ti,ab.
392.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
393.	"non-ST-segment elevation".ti,ab.
394.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
395.	"Q wave myocardial infarction".ti,ab.
396.	"non Q wave MI".ti,ab.
397.	(NSTE-ACS or STE-ACS).ti,ab.
398.	(subendocardial adj3 infarct*).ti,ab.
399.	((unstable or variant) adj2 angina*).ti,ab.
400.	(unstable adj2 coronary).ti,ab.
401.	or/1-16
402.	letter/
403.	editorial/
404.	news/
405.	exp historical article/
406.	Anecdotes as Topic/
407.	comment/
408.	case report/
409.	(letter or comment*).ti.
410.	or/18-25
411.	randomized controlled trial/ or random*.ti,ab.
412.	26 not 27
413.	animals/ not humans/
414.	exp Animals, Laboratory/
415.	exp Animal Experimentation/
416.	exp Models, Animal/
417.	exp Rodentia/
418.	(rat or rats or mouse or mice).ti.
419.	or/28-34
420.	17 not 35

421.	limit 36 to English language
422.	randomized controlled trial.pt.
423.	controlled clinical trial.pt.
424.	randomi#ed.ti,ab.
425.	placebo.ab.
426.	randomly.ti,ab.
427.	Clinical Trials as topic.sh.
428.	trial.ti.
429.	or/38-44
430.	Meta-Analysis/
431.	exp Meta-Analysis as Topic/
432.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
433.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
434.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
435.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
436.	(search* adj4 literature).ab.
437.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
438.	cochrane.jw.
439.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
440.	or/46-55
441.	Percutaneous Coronary Intervention/
442.	Percutaneous coronary intervention*.ti,ab.
443.	(PPCI or PCI).ti,ab.
444.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
445.	PTCA.ti,ab.
446.	Angioplasty, Balloon, Coronary/
447.	exp Angioplasty/
448.	(Balloon adj3 coronary).ti,ab.
449.	((primary or coronary or transluminal or balloon) adj3 angioplasty).ti,ab.
450.	Coronary artery dilat*.ti,ab.
451.	exp *Stents/
452.	drug eluting stent*.ti,ab.
453.	(eluting adj3 stent*).ti,ab.
454.	((paclitaxel or sirolimus or everolimus or biolimus or ridaforolimus or zotarolimus or novolimus) adj3 stent*).ti,ab.
455.	or/57-70
456.	(37 or 71) and (45 or 56)
457.	Factor Xa Inhibitors/
458.	(factor Xa inhibitors or apixaban or eliquis or rivaroxaban or xarelto or edoxaban or lixiana or dabigatran or pradaxa or warfarin or coumadin).ti,ab.
459.	rivaroxaban/
460.	DABIGATRAN/
461.	warfarin/
462.	oral anticoagul*.ti,ab.

463.	or/73-78
464.	72 and 79

Embase (Ovid) search terms

394.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
395.	heart arrest/
396.	(acute coronary adj2 syndrome*).ti,ab.
397.	((myocardial or heart) adj infarct*).ti,ab.
398.	(heart adj (attack* or event*)).ti,ab.
399.	((heart or cardiac) adj arrest*).ti,ab.
400.	(coronary adj2 thrombos*).ti,ab.
401.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
402.	"non-ST-segment elevation".ti,ab.
403.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
404.	"Q wave myocardial infarction".ti,ab.
405.	"non Q wave MI".ti,ab.
406.	(NSTE-ACS or STE-ACS).ti,ab.
407.	(subendocardial adj3 infarct*).ti,ab.
408.	((unstable or variant) adj2 angina*).ti,ab.
409.	(unstable adj2 coronary).ti,ab.
410.	or/1-16
411.	letter.pt. or letter/
412.	note.pt.
413.	editorial.pt.
414.	Case report/ or Case study/
415.	(letter or comment*).ti.
416.	or/18-22
417.	randomized controlled trial/ or random*.ti,ab.
418.	23 not 24
419.	animal/ not human/
420.	Nonhuman/
421.	exp Animal Experiment/
422.	exp Experimental animal/
423.	Animal model/
424.	exp Rodent/
425.	(rat or rats or mouse or mice).ti.
426.	or/25-32
427.	17 not 33
428.	limit 34 to English language
429.	random*.ti,ab.
430.	factorial*.ti,ab.
431.	(crossover* or cross over*).ti,ab.
432.	((doubl* or singl*) adj blind*).ti,ab.
433.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
434.	crossover procedure/

435.	single blind procedure/
436.	randomized controlled trial/
437.	double blind procedure/
438.	or/36-44
439.	systematic review/
440.	meta-analysis/
441.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
442.	((systematic or evidence) adj3 (review* or overview*)).ti,ab.
443.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
444.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
445.	(search* adj4 literature).ab.
446.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
447.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
448.	cochrane.jw.
449.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
450.	or/46-56
451.	transluminal coronary angioplasty/ or percutaneous coronary intervention/
452.	Percutaneous coronary intervention*.ti,ab.
453.	(PPCI or PCI).ti,ab.
454.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
455.	PTCA.ti,ab.
456.	transluminal coronary angioplasty/ or percutaneous transluminal angioplasty/ or angioplasty/ or percutaneous transluminal angioplasty balloon/
457.	(Balloon adj3 coronary).ti,ab.
458.	((primary or coronary or transluminal or balloon) adj3 angioplasty).ti,ab.
459.	Coronary artery dilat*.ti,ab.
460.	or/58-66
461.	*stent/ or exp *cardiovascular stent/ or exp *drug eluting stent/ or exp *metal stent/
462.	drug eluting stent*.ti,ab.
463.	(eluting adj3 stent*).ti,ab.
464.	((paclitaxel or sirolimus or everolimus or biolimus or ridaforolimus or zotarolimus or novolimus) adj3 stent*).ti,ab.
465.	or/68-71
466.	35 or 67 or 72
467.	73 and (45 or 57)
468.	blood clotting factor 10a inhibitor/
469.	(factor Xa inhibitors or apixaban or eliquis or rivaroxaban or xarelto or edoxaban or lixiana or dabigatran or pradaxa or warfarin or coumadin).ti,ab.
470.	apixaban/
471.	rivaroxaban/
472.	edoxaban/
473.	dabigatran/
474.	warfarin/
475.	oral anticoagul*.ti,ab.

476.	or/75-82
477.	74 and 83

Cochrane Library (Wiley) search terms

#195.	MeSH descriptor: [Acute Coronary Syndrome] this term only
#196.	MeSH descriptor: [Angina Pectoris] this term only
#197.	MeSH descriptor: [Angina, Unstable] this term only
#198.	MeSH descriptor: [Coronary Thrombosis] this term only
#199.	MeSH descriptor: [Myocardial Infarction] explode all trees
#200.	(or #1-#5)
#201.	MeSH descriptor: [Heart Arrest] this term only
#202.	(acute coronary near/2 syndrome*):ti,ab
#203.	((myocardial or heart) next infarct*):ti,ab
#204.	(heart next (attack* or event*)):ti,ab
#205.	((heart or cardiac) next arrest*):ti,ab
#206.	(coronary near/2 thrombos*):ti,ab
#207.	(stemi or st-segment or st segment or st-elevation or st elevation):ti,ab
#208.	non-ST-segment elevation:ti,ab
#209.	(non-STEMI or NSTEMI or nonSTEMI):ti,ab
#210.	Q wave myocardial infarction:ti,ab
#211.	non Q wave MI:ti,ab
#212.	(NSTE-ACS or STE-ACS):ti,ab
#213.	(subendocardial near/3 infarct*):ti,ab
#214.	((unstable or variant) near/2 angina*):ti,ab
#215.	(unstable near/2 coronary):ti,ab
#216.	(or #6-#21)
#217.	MeSH descriptor: [Percutaneous Coronary Intervention] explode all trees
#218.	Percutaneous coronary intervention*:ti,ab
#219.	(PPCI or PCI):ti,ab
#220.	MeSH descriptor: [Angioplasty, Balloon, Coronary] explode all trees
#221.	Percutaneous Transluminal Coronary Angioplasty:ti,ab
#222.	PTCA:ti,ab
#223.	MeSH descriptor: [Angioplasty] explode all trees
#224.	(Balloon near/3 coronary):ti,ab
#225.	((primary or coronary or transluminal or balloon) near/3 angioplasty):ti,ab
#226.	Coronary artery dilat*:ti,ab
#227.	(or #23-#32)
#228.	MeSH descriptor: [Stents] explode all trees
#229.	(drug next eluting next stent*):ti,ab
#230.	(eluting near/3 stent*):ti,ab
#231.	((paclitaxel or sirolimus or everolimus or biolimus or ridaforolimus or zotarolimus or novolimus) near/3 stent*):ti,ab
#232.	(or #34-#37)
#233.	#22 or #33 or #38
#234.	MeSH descriptor: [Factor Xa Inhibitors] explode all trees
#235.	(factor Xa inhibitors or apixaban or eliquis or rivaroxaban or xarelto or edoxaban or

	lixiana or dabigatran or pradaxa or warfarin or coumadin):ti,ab
#236.	MeSH descriptor: [Rivaroxaban] explode all trees
#237.	MeSH descriptor: [Dabigatran] explode all trees
#238.	MeSH descriptor: [Warfarin] explode all trees
#239.	oral anticoagul*.ti,ab
#240.	(or #40-#45)
#241.	#39 and #46

G.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a search relating to acute coronary syndromes population combined with terms for interventions in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase using a filter for health economics studies.

Table 14: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Embase	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - 2003 – 31 March 2018 NHSEED - 2003 to 31 March 2015	None

Medline (Ovid) search terms

667.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
668.	Heart Arrest/
669.	(acute coronary adj2 syndrome*).ti,ab.
670.	((myocardial or heart) adj infarct*).ti,ab.
671.	(heart adj (attack* or event*)).ti,ab.
672.	((heart or cardiac) adj arrest*).ti,ab.
673.	(coronary adj2 thrombos*).ti,ab.
674.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
675.	"non-ST-segment elevation".ti,ab.
676.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
677.	"Q wave myocardial infarction".ti,ab.
678.	"non Q wave MI".ti,ab.
679.	NSTE-ACS.ti,ab.
680.	(subendocardial adj3 infarct*).ti,ab.
681.	((unstable or variant) adj2 angina*).ti,ab.

682.	(unstable adj2 coronary).ti,ab.
683.	or/1-16
684.	letter/
685.	editorial/
686.	news/
687.	exp historical article/
688.	Anecdotes as Topic/
689.	comment/
690.	case report/
691.	(letter or comment*).ti.
692.	or/18-25
693.	randomized controlled trial/ or random*.ti,ab.
694.	26 not 27
695.	animals/ not humans/
696.	exp Animals, Laboratory/
697.	exp Animal Experimentation/
698.	exp Models, Animal/
699.	exp Rodentia/
700.	(rat or rats or mouse or mice).ti.
701.	or/28-34
702.	17 not 35
703.	limit 36 to English language
704.	Economics/
705.	Value of life/
706.	exp "Costs and Cost Analysis"/
707.	exp Economics, Hospital/
708.	exp Economics, Medical/
709.	Economics, Nursing/
710.	Economics, Pharmaceutical/
711.	exp "Fees and Charges"/
712.	exp Budgets/
713.	budget*.ti,ab.
714.	cost*.ti.
715.	(economic* or pharmaco?economic*).ti.
716.	(price* or pricing*).ti,ab.
717.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
718.	(financ* or fee or fees).ti,ab.
719.	(value adj2 (money or monetary)).ti,ab.
720.	or/38-53
721.	37 and 54

722.	*Angiography/
723.	Angiocardiography/
724.	Coronary Angiography/
725.	Angiograph*.ti.
726.	Arteriograph*.ti.
727.	Angiocardiograph*.ti,ab.
728.	Coronary Angiograph*.ti,ab.
729.	Angiogram*.ti,ab.
730.	Cardioangiograph*.ti,ab.
731.	Angiocardiogram.ti,ab.
732.	Angio Cardiograph*.ti,ab.
733.	Coronary Arteriogra*.ti,ab.
734.	Coronarograph*.ti,ab.
735.	*Myocardial Revascularization/
736.	Angioplasty, Balloon, Coronary/
737.	(Myocardial adj revasculari?ation).ti,ab.
738.	PCI.ti,ab.
739.	Percutaneous coronary intervention.ti,ab.
740.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
741.	PTCA.ti,ab.
742.	exp Angioplasty/
743.	Blunt microdissection.ti,ab.
744.	((laser or patch) adj angioplasty).ti,ab.
745.	Percutaneous Transluminal Angioplasty.ti,ab.
746.	Transluminal Coronary Angioplasty.ti,ab.
747.	(Balloon adj3 coronary).ti,ab.
748.	(Balloon adj3 angioplasty).ti,ab.
749.	exp STENTS/
750.	stent*.ti,ab.
751.	Or/56-84
752.	aspirin/
753.	(aspirin or acetylsalicylic acid).ti,ab.
754.	(clopidogrel or plavix).ti,ab.
755.	(ticagrelor or briliq).ti,ab.
756.	(prasugrel or efient or effient or prasita).ti,ab.
757.	Prasugrel Hydrochloride/
758.	platelet aggregation inhibitors/
759.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
760.	exp Platelet Glycoprotein GPIIb-IIIa Complex/
761.	exp Receptors, Fibrinogen/
762.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
763.	exp adrenergic beta-antagonists/
764.	(propranolol or angilol or inderal-la or half-inderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or

	emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
765.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or celiprolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/
766.	(beta adj3 block*).ti,ab.
767.	(b adj3 block*).ti,ab.
768.	(beta adj2 antagonist*).ti,ab.
769.	Antithrombins/
770.	Antithrombin*.ti,ab.
771.	(thrombin adj3 inhibitor*).ti,ab.
772.	Hirudins/
773.	Hirudin*.ti,ab.
774.	Hirulog.ti,ab.
775.	Bivalirudin.ti,ab.
776.	Or/86-109
777.	55 and (85 or 110)

Embase (Ovid) search terms

637.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
638.	heart arrest/
639.	(acute coronary adj2 syndrome*).ti,ab.
640.	((myocardial or heart) adj infarct*).ti,ab.
641.	(heart adj (attack* or event*)).ti,ab.
642.	((heart or cardiac) adj arrest*).ti,ab.
643.	(coronary adj2 thrombos*).ti,ab.
644.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
645.	"non-ST-segment elevation".ti,ab.
646.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
647.	"Q wave myocardial infarction".ti,ab.
648.	"non Q wave MI".ti,ab.
649.	NSTE-ACS.ti,ab.
650.	(subendocardial adj3 infarct*).ti,ab.
651.	((unstable or variant) adj2 angina*).ti,ab.
652.	(unstable adj2 coronary).ti,ab.
653.	or/1-16
654.	letter.pt. or letter/
655.	note.pt.
656.	editorial.pt.
657.	Case report/ or Case study/
658.	(letter or comment*).ti.
659.	or/18-22

660.	randomized controlled trial/ or random*.ti,ab.
661.	23 not 24
662.	animal/ not human/
663.	Nonhuman/
664.	exp Animal Experiment/
665.	exp Experimental animal/
666.	Animal model/
667.	exp Rodent/
668.	(rat or rats or mouse or mice).ti.
669.	or/25-32
670.	17 not 33
671.	limit 34 to English language
672.	health economics/
673.	exp economic evaluation/
674.	exp health care cost/
675.	exp fee/
676.	budget/
677.	funding/
678.	budget*.ti,ab.
679.	cost*.ti.
680.	(economic* or pharmaco?economic*).ti.
681.	(price* or pricing*).ti,ab.
682.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
683.	(financ* or fee or fees).ti,ab.
684.	(value adj2 (money or monetary)).ti,ab.
685.	or/36-48
686.	35 and 49
687.	angiography/
688.	angiocardiography/
689.	coronary angiography/
690.	Angiograph*.ti.
691.	Arteriograph*.ti.
692.	Angiocardiograph*.ti,ab.
693.	Coronary Angiograph*.ti,ab.
694.	Angiogram*.ti,ab.
695.	Cardioangiograph*.ti,ab.
696.	Angiocardiogram.ti,ab.
697.	Angio Cardiograph*.ti,ab.
698.	Coronary Arteriogra*.ti,ab.
699.	Coronarograph*.ti,ab.

700.	*heart muscle revascularization/
701.	transluminal coronary angioplasty/
702.	(Myocardial adj revasculari?ation).ti,ab.
703.	PCI.ti,ab.
704.	Percutaneous coronary intervention.ti,ab.
705.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
706.	PTCA.ti,ab.
707.	*angioplasty/
708.	Blunt microdissection.ti,ab.
709.	((laser or patch) adj angioplasty).ti,ab.
710.	Percutaneous Transluminal Angioplasty.ti,ab.
711.	Transluminal Coronary Angioplasty.ti,ab.
712.	(Balloon adj3 coronary).ti,ab.
713.	(Balloon adj3 angioplasty).ti,ab.
714.	exp STENTS/
715.	stent*.ti,ab.
716.	Or/51-79
717.	acetylsalicylic acid/
718.	(aspirin or acetylsalicylic acid).ti,ab.
719.	(clopidogrel or plavix).ti,ab.
720.	(ticagrelor or briliq).ti,ab.
721.	(prasugrel or efient or effient or prasita).ti,ab.
722.	prasugrel/
723.	antithrombocytic agent/
724.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
725.	exp fibrinogen receptor/
726.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
727.	abciximab/ or eptifibatide/ or tirofiban/
728.	exp beta adrenergic receptor blocking agent/
729.	(propranolol or angilol or inderal-1a or half-inderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopesor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
730.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or bisoprolol fumarate/ or carvedilol/ or celiprolol/ or esmolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/ or timolol maleate/
731.	(beta adj3 block*).ti,ab.
732.	(b adj3 block*).ti,ab.
733.	(beta adj2 antagonist*).ti,ab.

734.	antithrombin/
735.	Antithrombin*.ti,ab.
736.	(thrombin adj3 inhibitor*).ti,ab.
737.	hirudin derivative/
738.	Hirudin*.ti,ab.
739.	Hirulog.ti,ab.
740.	Bivalirudin.ti,ab.
741.	Or/81-104
742.	50 and (80 or 105)

NHS EED and HTA (CRD) search terms

#547.	MeSH DESCRIPTOR Acute Coronary Syndrome
#548.	(MeSH DESCRIPTOR angina pectoris)
#549.	(MeSH DESCRIPTOR Angina, Unstable)
#550.	(MeSH DESCRIPTOR Coronary Thrombosis)
#551.	MeSH DESCRIPTOR Myocardial Infarction EXPLODE ALL TREES
#552.	#1 OR #2 OR #3 OR #4 OR #5
#553.	(MeSH DESCRIPTOR Heart Arrest)
#554.	((acute coronary adj2 syndrome*))
#555.	((myocardial or heart) adj infarct*))
#556.	((heart adj (attack* or event*))
#557.	((heart or cardiac) adj arrest*))
#558.	((coronary adj2 thrombos*))
#559.	((stemi or st-segment or st segment or st-elevation or st elevation))
#560.	("non-ST-segment elevation")
#561.	((non-STEMI or NSTEMI or nonSTEMI))
#562.	("Q wave myocardial infarction")
#563.	("non Q wave MI")
#564.	(NSTE-ACS)
#565.	(STE-ACS)
#566.	((subendocardial adj3 infarct*))
#567.	((unstable or variant) adj2 angina*))
#568.	((unstable adj2 coronary))
#569.	(#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22)
#570.	(MeSH DESCRIPTOR Angiography)
#571.	(MeSH DESCRIPTOR Angiocardiology)
#572.	((MeSH DESCRIPTOR Coronary Angiography))
#573.	((Angiograph*))
#574.	((Arteriograph*))
#575.	((Angiocardiology*))
#576.	((Coronary Angiograph*))
#577.	((Angiogram*))
#578.	((Cardioangiograph*))
#579.	((Angiocardiology))

#580.	((Angio Cardiograph*))
#581.	((Coronary Arteriogra*))
#582.	((Coronarograph*))
#583.	(MeSH DESCRIPTOR Myocardial Revascularization)
#584.	(MeSH DESCRIPTOR Angioplasty, Balloon, Coronary)
#585.	((Myocardial adj revasculari?ation))
#586.	((PCI))
#587.	((Percutaneous coronary intervention))
#588.	((Percutaneous Transluminal Coronary Angioplasty))
#589.	((PTCA))
#590.	(MeSH DESCRIPTOR Angioplasty EXPLODE ALL TREES)
#591.	((Blunt microdissection))
#592.	(((((laser or patch) adj angioplasty)))
#593.	((Percutaneous Transluminal Angioplasty))
#594.	((Transluminal Coronary Angioplasty))
#595.	((Balloon adj3 coronary))
#596.	((Balloon adj3 angioplasty))
#597.	(MeSH DESCRIPTOR Stents EXPLODE ALL TREES)
#598.	((stent*))
#599.	(#24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52)
#600.	(MeSH DESCRIPTOR Aspirin)
#601.	((aspirin or acetylsalicylic acid))
#602.	((clopidogrel or plavix))
#603.	((ticagrelor or brilique))
#604.	((prasugrel or efient or effient or prasita))
#605.	MeSH DESCRIPTOR Prasugrel Hydrochloride
#606.	MeSH DESCRIPTOR Platelet Aggregation Inhibitors
#607.	((Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA))
#608.	MeSH DESCRIPTOR Platelet Glycoprotein GPIIb-IIIa Complex EXPLODE ALL TREES
#609.	MeSH DESCRIPTOR Receptors, Fibrinogen EXPLODE ALL TREES
#610.	((Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat))
#611.	MeSH DESCRIPTOR Adrenergic beta-Antagonists EXPLODE ALL TREES
#612.	((propranolol or angilol or inderal-1a or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim))
#613.	(MeSH DESCRIPTOR propranolol)
#614.	(MeSH DESCRIPTOR acebutolol)
#615.	(MeSH DESCRIPTOR atenolol)
#616.	(MeSH DESCRIPTOR bisoprolol)
#617.	(MeSH DESCRIPTOR celiprolol)

#618.	(MeSH DESCRIPTOR labetalol)
#619.	(MeSH DESCRIPTOR metoprolol)
#620.	(MeSH DESCRIPTOR nadolol)
#621.	(MeSH DESCRIPTOR nebivolol)
#622.	(MeSH DESCRIPTOR oxprenolol)
#623.	(MeSH DESCRIPTOR pindolol)
#624.	(MeSH DESCRIPTOR sotalol)
#625.	(MeSH DESCRIPTOR timolol)
#626.	((beta adj3 block*))
#627.	((b adj3 block*))
#628.	((beta adj2 antagonist*))
#629.	MeSH DESCRIPTOR Antithrombins
#630.	(Antithrombin*)
#631.	((thrombin adj3 inhibitor*))
#632.	MeSH DESCRIPTOR Hirudins
#633.	(Hirudin*)
#634.	(Hirulog)
#635.	(Bivalirudin)
#636.	#54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89
#637.	(#23 AND (#53 OR #90))

Appendix H: Beta-blockers

Acute coronary syndromes search strategy - betablockers

This literature search strategy was used for the following reviews;

- What is the optimal duration of beta-blocker therapy to improve outcomes for adults without left ventricular dysfunction after myocardial infarction?

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

H.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 15: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 22 July 2019	Exclusions Randomised controlled trials Systematic review studies Observational studies
Embase (OVID)	1974 – 22 July 2019	Exclusions Randomised controlled trials Systematic review studies Observational studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 7 of 7 CENTRAL to YYYY 2019 Issue 7 of 7 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

465.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
466.	Heart Arrest/
467.	(acute coronary adj2 syndrome*).ti,ab.
468.	((myocardial or heart) adj infarct*).ti,ab.
469.	(heart adj (attack* or event*)).ti,ab.
470.	((heart or cardiac) adj arrest*).ti,ab.
471.	(coronary adj2 thrombos*).ti,ab.
472.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
473.	"non-ST-segment elevation".ti,ab.
474.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
475.	"Q wave myocardial infarction".ti,ab.
476.	"non Q wave MI".ti,ab.
477.	(NSTE-ACS or STE-ACS).ti,ab.
478.	(subendocardial adj3 infarct*).ti,ab.
479.	((unstable or variant) adj2 angina*).ti,ab.
480.	(unstable adj2 coronary).ti,ab.
481.	or/1-16
482.	letter/
483.	editorial/
484.	news/
485.	exp historical article/
486.	Anecdotes as Topic/
487.	comment/
488.	case report/
489.	(letter or comment*).ti.
490.	or/18-25

491.	randomized controlled trial/ or random*.ti,ab.
492.	26 not 27
493.	animals/ not humans/
494.	exp Animals, Laboratory/
495.	exp Animal Experimentation/
496.	exp Models, Animal/
497.	exp Rodentia/
498.	(rat or rats or mouse or mice).ti.
499.	or/28-34
500.	17 not 35
501.	limit 36 to English language
502.	exp Adrenergic beta-Antagonists/
503.	(Acebutolol or Atenolol or Bisoprolol or Carvedilol or Celiprolol or Esmolol or Labetalol or Metoprolol or Nadolol or Nebivolol or Oxprenolol or Propranolol or Pindolol or Sotalol or Timolol).ti,ab.
504.	(beta adj3 block*).ti,ab.
505.	((beta-adrenoceptor or b-adrenoceptor or beta-adrenergic) adj (block* or antagonist*).ti,ab.
506.	(b adj3 block*).ti,ab.
507.	(beta adj2 antagonist*).ti,ab.
508.	or/38-43
509.	37 and 44
510.	randomized controlled trial.pt.
511.	controlled clinical trial.pt.
512.	randomi#ed.ti,ab.
513.	placebo.ab.
514.	randomly.ti,ab.
515.	Clinical Trials as topic.sh.
516.	trial.ti.
517.	or/46-52
518.	Meta-Analysis/
519.	exp Meta-Analysis as Topic/
520.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
521.	((systematic* or evidence*) adj3 (review* or overview*).ti,ab.
522.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
523.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
524.	(search* adj4 literature).ab.
525.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
526.	cochrane.jw.
527.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
528.	or/54-63
529.	Epidemiologic studies/
530.	Observational study/
531.	exp Cohort studies/

532.	(cohort adj (study or studies or analys* or data)).ti,ab.
533.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
534.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
535.	Controlled Before-After Studies/
536.	Historically Controlled Study/
537.	Interrupted Time Series Analysis/
538.	(before adj2 after adj2 (study or studies or data)).ti,ab.
539.	exp case control study/
540.	case control*.ti,ab.
541.	Cross-sectional studies/
542.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
543.	or/65-78
544.	45 and (53 or 64 or 79)

Embase (Ovid) search terms

478.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
479.	heart arrest/
480.	(acute coronary adj2 syndrome*).ti,ab.
481.	((myocardial or heart) adj infarct*).ti,ab.
482.	(heart adj (attack* or event*)).ti,ab.
483.	((heart or cardiac) adj arrest*).ti,ab.
484.	(coronary adj2 thrombos*).ti,ab.
485.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
486.	"non-ST-segment elevation".ti,ab.
487.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
488.	"Q wave myocardial infarction".ti,ab.
489.	"non Q wave MI".ti,ab.
490.	(NSTE-ACS or STE-ACS).ti,ab.
491.	(subendocardial adj3 infarct*).ti,ab.
492.	((unstable or variant) adj2 angina*).ti,ab.
493.	(unstable adj2 coronary).ti,ab.
494.	or/1-16
495.	letter.pt. or letter/
496.	note.pt.
497.	editorial.pt.
498.	Case report/ or Case study/
499.	(letter or comment*).ti.
500.	or/18-22
501.	randomized controlled trial/ or random*.ti,ab.
502.	23 not 24
503.	animal/ not human/
504.	Nonhuman/
505.	exp Animal Experiment/

506.	exp Experimental animal/
507.	Animal model/
508.	exp Rodent/
509.	(rat or rats or mouse or mice).ti.
510.	or/25-32
511.	17 not 33
512.	limit 34 to English language
513.	exp *beta adrenergic receptor blocking agent/
514.	(Acebutolol or Atenolol or Bisoprolol or Carvedilol or Celiprolol or Esmolol or Labetalol or Metoprolol or Nadolol or Nebivolol or Oxprenolol or Propranolol or Pindolol or Sotalol or Timolol).ti,ab.
515.	(beta adj3 block*).ti,ab.
516.	((beta-adrenoceptor or b-adrenoceptor or beta-adrenergic) adj (block* or antagonist*).ti,ab.
517.	(b adj3 block*).ti,ab.
518.	(beta adj2 antagonist*).ti,ab.
519.	or/36-41
520.	35 and 42
521.	random*.ti,ab.
522.	factorial*.ti,ab.
523.	(crossover* or cross over*).ti,ab.
524.	((doubl* or singl*) adj blind*).ti,ab.
525.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
526.	crossover procedure/
527.	single blind procedure/
528.	randomized controlled trial/
529.	double blind procedure/
530.	or/44-52
531.	systematic review/
532.	meta-analysis/
533.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
534.	((systematic or evidence) adj3 (review* or overview*).ti,ab.
535.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
536.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
537.	(search* adj4 literature).ab.
538.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
539.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
540.	cochrane.jw.
541.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
542.	or/54-64
543.	Clinical study/
544.	Observational study/
545.	family study/
546.	longitudinal study/

547.	retrospective study/
548.	prospective study/
549.	cohort analysis/
550.	follow-up/
551.	cohort*.ti,ab.
552.	73 and 74
553.	(cohort adj (study or studies or analys* or data)).ti,ab.
554.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
555.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
556.	(before adj2 after adj2 (study or studies or data)).ti,ab.
557.	exp case control study/
558.	case control*.ti,ab.
559.	cross-sectional study/
560.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
561.	or/66-72,75-83
562.	43 and (53 or 65 or 84)

Cochrane Library (Wiley) search terms

#242.	MeSH descriptor: [Acute Coronary Syndrome] this term only
#243.	MeSH descriptor: [Angina Pectoris] this term only
#244.	MeSH descriptor: [Angina, Unstable] this term only
#245.	MeSH descriptor: [Coronary Thrombosis] this term only
#246.	MeSH descriptor: [Myocardial Infarction] explode all trees
#247.	(or #1-#5)
#248.	MeSH descriptor: [Heart Arrest] this term only
#249.	(acute coronary near/2 syndrome*):ti,ab
#250.	((myocardial or heart) next infarct*):ti,ab
#251.	(heart next (attack* or event*)):ti,ab
#252.	((heart or cardiac) next arrest*):ti,ab
#253.	(coronary near/2 thrombos*):ti,ab
#254.	(stemi or st-segment or st segment or st-elevation or st elevation):ti,ab
#255.	non-ST-segment elevation:ti,ab
#256.	(non-STEMI or NSTEMI or nonSTEMI):ti,ab
#257.	Q wave myocardial infarction:ti,ab
#258.	non Q wave MI:ti,ab
#259.	(NSTEMI-ACS or STE-ACS):ti,ab
#260.	(subendocardial near/3 infarct*):ti,ab
#261.	((unstable or variant) near/2 angina*):ti,ab
#262.	(unstable near/2 coronary):ti,ab
#263.	(or #6-#21)
#264.	MeSH descriptor: [Adrenergic beta-Antagonists] explode all trees
#265.	(Acebutolol or Atenolol or Bisoprolol or Carvedilol or Celiprolol or Esmolol or Labetalol or Metoprolol or Nadolol or Nebivolol or Oxprenolol or Propranolol or Pindolol or Sotalol or Timolol):ti,ab
#266.	(beta near/3 block*):ti,ab

#267.	((beta-adrenoceptor or b-adrenoceptor or beta-adrenergic) next (block* or antagonist*)):ti,ab
#268.	(b near/3 block*):ti,ab
#269.	(beta near/2 antagonist*):ti,ab
#270.	(OR #23-#28)
#271.	#22 AND #29

H.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a search relating to acute coronary syndromes population combined with terms for interventions in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase using a filter for health economics studies.

Table 16: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Embase	01 January 2014 – 18 June 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - 2003 – 31 March 2018 NHSEED - 2003 to 31 March 2015	None

Medline (Ovid) search terms

778.	Acute Coronary Syndrome/ or Angina Pectoris/ or Angina, Unstable/ or Coronary Thrombosis/ or exp Myocardial Infarction/
779.	Heart Arrest/
780.	(acute coronary adj2 syndrome*).ti,ab.
781.	((myocardial or heart) adj infarct*).ti,ab.
782.	(heart adj (attack* or event*)).ti,ab.
783.	((heart or cardiac) adj arrest*).ti,ab.
784.	(coronary adj2 thrombos*).ti,ab.
785.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
786.	"non-ST-segment elevation".ti,ab.
787.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
788.	"Q wave myocardial infarction".ti,ab.
789.	"non Q wave MI".ti,ab.
790.	NSTE-ACS.ti,ab.
791.	(subendocardial adj3 infarct*).ti,ab.
792.	((unstable or variant) adj2 angina*).ti,ab.
793.	(unstable adj2 coronary).ti,ab.

794.	or/1-16
795.	letter/
796.	editorial/
797.	news/
798.	exp historical article/
799.	Anecdotes as Topic/
800.	comment/
801.	case report/
802.	(letter or comment*).ti.
803.	or/18-25
804.	randomized controlled trial/ or random*.ti,ab.
805.	26 not 27
806.	animals/ not humans/
807.	exp Animals, Laboratory/
808.	exp Animal Experimentation/
809.	exp Models, Animal/
810.	exp Rodentia/
811.	(rat or rats or mouse or mice).ti.
812.	or/28-34
813.	17 not 35
814.	limit 36 to English language
815.	Economics/
816.	Value of life/
817.	exp "Costs and Cost Analysis"/
818.	exp Economics, Hospital/
819.	exp Economics, Medical/
820.	Economics, Nursing/
821.	Economics, Pharmaceutical/
822.	exp "Fees and Charges"/
823.	exp Budgets/
824.	budget*.ti,ab.
825.	cost*.ti.
826.	(economic* or pharmaco?economic*).ti.
827.	(price* or pricing*).ti,ab.
828.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
829.	(financ* or fee or fees).ti,ab.
830.	(value adj2 (money or monetary)).ti,ab.
831.	or/38-53
832.	37 and 54
833.	*Angiography/

834.	Angiocardiology/
835.	Coronary Angiography/
836.	Angiograph*.ti.
837.	Arteriograph*.ti.
838.	Angiocardiology*.ti,ab.
839.	Coronary Angiograph*.ti,ab.
840.	Angiogram*.ti,ab.
841.	Cardioangiograph*.ti,ab.
842.	Angiocardiology.ti,ab.
843.	Angio Cardiology*.ti,ab.
844.	Coronary Arteriogra*.ti,ab.
845.	Coronarograph*.ti,ab.
846.	*Myocardial Revascularization/
847.	Angioplasty, Balloon, Coronary/
848.	((Myocardial adj revasculari?ation).ti,ab.
849.	PCI.ti,ab.
850.	Percutaneous coronary intervention.ti,ab.
851.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
852.	PTCA.ti,ab.
853.	exp Angioplasty/
854.	Blunt microdissection.ti,ab.
855.	((laser or patch) adj angioplasty).ti,ab.
856.	Percutaneous Transluminal Angioplasty.ti,ab.
857.	Transluminal Coronary Angioplasty.ti,ab.
858.	(Balloon adj3 coronary).ti,ab.
859.	(Balloon adj3 angioplasty).ti,ab.
860.	exp STENTS/
861.	stent*.ti,ab.
862.	Or/56-84
863.	aspirin/
864.	(aspirin or acetylsalicylic acid).ti,ab.
865.	(clopidogrel or plavix).ti,ab.
866.	(ticagrelor or brilique).ti,ab.
867.	(prasugrel or efient or effient or prasita).ti,ab.
868.	Prasugrel Hydrochloride/
869.	platelet aggregation inhibitors/
870.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA).ti,ab.
871.	exp Platelet Glycoprotein GPIIb-IIIa Complex/
872.	exp Receptors, Fibrinogen/
873.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
874.	exp adrenergic beta-antagonists/
875.	(propranolol or angilol or inderal-la or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or

	tenoretic or esmolol or breviploc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim).ti,ab.
876.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or celiprolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/
877.	(beta adj3 block*).ti,ab.
878.	(b adj3 block*).ti,ab.
879.	(beta adj2 antagonist*).ti,ab.
880.	Antithrombins/
881.	Antithrombin*.ti,ab.
882.	(thrombin adj3 inhibitor*).ti,ab.
883.	Hirudins/
884.	Hirudin*.ti,ab.
885.	Hirulog.ti,ab.
886.	Bivalirudin.ti,ab.
887.	Or/86-109
888.	55 and (85 or 110)

Embase (Ovid) search terms

743.	acute coronary syndrome/ or angina pectoris/ or unstable angina pectoris/ or coronary artery thrombosis/ or exp heart infarction/
744.	heart arrest/
745.	(acute coronary adj2 syndrome*).ti,ab.
746.	((myocardial or heart) adj infarct*).ti,ab.
747.	(heart adj (attack* or event*)).ti,ab.
748.	((heart or cardiac) adj arrest*).ti,ab.
749.	(coronary adj2 thrombos*).ti,ab.
750.	(stemi or st-segment or st segment or st-elevation or st elevation).ti,ab.
751.	"non-ST-segment elevation".ti,ab.
752.	(non-STEMI or NSTEMI or nonSTEMI).ti,ab.
753.	"Q wave myocardial infarction".ti,ab.
754.	"non Q wave MI".ti,ab.
755.	NSTE-ACS.ti,ab.
756.	(subendocardial adj3 infarct*).ti,ab.
757.	((unstable or variant) adj2 angina*).ti,ab.
758.	(unstable adj2 coronary).ti,ab.
759.	or/1-16
760.	letter.pt. or letter/
761.	note.pt.
762.	editorial.pt.
763.	Case report/ or Case study/
764.	(letter or comment*).ti.

765.	or/18-22
766.	randomized controlled trial/ or random*.ti,ab.
767.	23 not 24
768.	animal/ not human/
769.	Nonhuman/
770.	exp Animal Experiment/
771.	exp Experimental animal/
772.	Animal model/
773.	exp Rodent/
774.	(rat or rats or mouse or mice).ti.
775.	or/25-32
776.	17 not 33
777.	limit 34 to English language
778.	health economics/
779.	exp economic evaluation/
780.	exp health care cost/
781.	exp fee/
782.	budget/
783.	funding/
784.	budget*.ti,ab.
785.	cost*.ti.
786.	(economic* or pharmaco?economic*).ti.
787.	(price* or pricing*).ti,ab.
788.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
789.	(financ* or fee or fees).ti,ab.
790.	(value adj2 (money or monetary)).ti,ab.
791.	or/36-48
792.	35 and 49
793.	angiography/
794.	angiocardiography/
795.	coronary angiography/
796.	Angiograph*.ti.
797.	Arteriograph*.ti.
798.	Angiocardiograph*.ti,ab.
799.	Coronary Angiograph*.ti,ab.
800.	Angiogram*.ti,ab.
801.	Cardioangiograph*.ti,ab.

802.	Angiogram.ti,ab.
803.	Angio Cardiograph*.ti,ab.
804.	Coronary Arteriogra*.ti,ab.
805.	Coronarograph*.ti,ab.
806.	*heart muscle revascularization/
807.	transluminal coronary angioplasty/
808.	(Myocardial adj revasculari?ation).ti,ab.
809.	PCI.ti,ab.
810.	Percutaneous coronary intervention.ti,ab.
811.	Percutaneous Transluminal Coronary Angioplasty.ti,ab.
812.	PTCA.ti,ab.
813.	*angioplasty/
814.	Blunt microdissection.ti,ab.
815.	((laser or patch) adj angioplasty).ti,ab.
816.	Percutaneous Transluminal Angioplasty.ti,ab.
817.	Transluminal Coronary Angioplasty.ti,ab.
818.	(Balloon adj3 coronary).ti,ab.
819.	(Balloon adj3 angioplasty).ti,ab.
820.	exp STENTS/
821.	stent*.ti,ab.
822.	Or/51-79
823.	acetylsalicylic acid/
824.	(aspirin or acetylsalicylic acid).ti,ab.
825.	(clopidogrel or plavix).ti,ab.
826.	(ticagrelor or brilique).ti,ab.
827.	(prasugrel or efient or effient or prasita).ti,ab.
828.	prasugrel/
829.	antithrombocytic agent/
830.	(Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphasIIb beta3 or GPIIB IIIA).ti,ab.
831.	exp fibrinogen receptor/
832.	(Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat).ti,ab.
833.	abciximab/ or eptifibatide/ or tirofiban/
834.	exp beta adrenergic receptor blocking agent/
835.	(propranolol or angilol or inderal-1a or half-inderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or loproresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or

	betim).ti,ab.
836.	propranolol/ or acebutolol/ or atenolol/ or bisoprolol/ or bisoprolol fumarate/ or carvedilol/ or celiprolol/ or esmolol/ or labetalol/ or metoprolol/ or nadolol/ or nebivolol/ or oxprenolol/ or pindolol/ or sotalol/ or timolol/ or timolol maleate/
837.	(beta adj3 block*).ti,ab.
838.	(b adj3 block*).ti,ab.
839.	(beta adj2 antagonist*).ti,ab.
840.	antithrombin/
841.	Antithrombin*.ti,ab.
842.	(thrombin adj3 inhibitor*).ti,ab.
843.	hirudin derivative/
844.	Hirudin*.ti,ab.
845.	Hirulog.ti,ab.
846.	Bivalirudin.ti,ab.
847.	Or/81-104
848.	50 and (80 or 105)

NHS EED and HTA (CRD) search terms

#638.	MeSH DESCRIPTOR Acute Coronary Syndrome
#639.	(MeSH DESCRIPTOR angina pectoris)
#640.	(MeSH DESCRIPTOR Angina, Unstable)
#641.	(MeSH DESCRIPTOR Coronary Thrombosis)
#642.	MeSH DESCRIPTOR Myocardial Infarction EXPLODE ALL TREES
#643.	#1 OR #2 OR #3 OR #4 OR #5
#644.	(MeSH DESCRIPTOR Heart Arrest)
#645.	((acute coronary adj2 syndrome*))
#646.	((myocardial or heart) adj infarct*))
#647.	((heart adj (attack* or event**)))
#648.	((heart or cardiac) adj arrest*))
#649.	((coronary adj2 thrombos*))
#650.	((stemi or st-segment or st segment or st-elevation or st elevation))
#651.	("non-ST-segment elevation")
#652.	((non-STEMI or NSTEMI or nonSTEMI))
#653.	("Q wave myocardial infarction")
#654.	("non Q wave MI")
#655.	(NSTE-ACS)
#656.	(STE-ACS)
#657.	((subendocardial adj3 infarct**))
#658.	((unstable or variant) adj2 angina**))
#659.	((unstable adj2 coronary**))
#660.	(#6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22)
#661.	(MeSH DESCRIPTOR Angiography)
#662.	(MeSH DESCRIPTOR Angiocardiography)

#663.	((MeSH DESCRIPTOR Coronary Angiography))
#664.	((Angiograph*))
#665.	((Arteriograph*))
#666.	((Angiocardiograph*))
#667.	((Coronary Angiograph*))
#668.	((Angiogram*))
#669.	((Cardioangiograph*))
#670.	((Angiocardiogram))
#671.	((Angio Cardiograph*))
#672.	((Coronary Arteriogra*))
#673.	((Coronarograph*))
#674.	(MeSH DESCRIPTOR Myocardial Revascularization)
#675.	(MeSH DESCRIPTOR Angioplasty, Balloon, Coronary)
#676.	((Myocardial adj revasculari?ation))
#677.	((PCI))
#678.	((Percutaneous coronary intervention))
#679.	((Percutaneous Transluminal Coronary Angioplasty))
#680.	((PTCA))
#681.	(MeSH DESCRIPTOR Angioplasty EXPLODE ALL TREES)
#682.	((Blunt microdissection))
#683.	((laser or patch) adj angioplasty))
#684.	((Percutaneous Transluminal Angioplasty))
#685.	((Transluminal Coronary Angioplasty))
#686.	((Balloon adj3 coronary))
#687.	((Balloon adj3 angioplasty))
#688.	(MeSH DESCRIPTOR Stents EXPLODE ALL TREES)
#689.	((stent*))
#690.	(#24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52)
#691.	(MeSH DESCRIPTOR Aspirin)
#692.	((aspirin or acetylsalicylic acid))
#693.	((clopidogrel or plavix))
#694.	((ticagrelor or brilique))
#695.	((prasugrel or efient or effient or prasita))
#696.	MeSH DESCRIPTOR Prasugrel Hydrochloride
#697.	MeSH DESCRIPTOR Platelet Aggregation Inhibitors
#698.	((Glycoproteins IIb-IIIa or GPIIb-IIIa Receptors or Integrin alpha-IIb beta-3 or Integrin alphallbbeta3 or GPIIB IIIA))
#699.	MeSH DESCRIPTOR Platelet Glycoprotein GPIIb-IIIa Complex EXPLODE ALL TREES
#700.	MeSH DESCRIPTOR Receptors, Fibrinogen EXPLODE ALL TREES
#701.	((Abciximab or Reopro or Eptifibatide or Integrelin or Integrilin or Intrifiban or Tirofiban or Aggrastat))
#702.	MeSH DESCRIPTOR Adrenergic beta-Antagonists EXPLODE ALL TREES
#703.	((propranolol or angilol or inderal-Ia or half-inalderal or inderal or bedranol or prograne or slo-pro or acebutolol or sectral or atenolol or tenormin or bisoprolol or cardicor or emcor or carvedilol or eucardic or celiprolol or celectol or co-tenidone or tenoret or

	tenoretic or esmolol or brevibloc or labetalol or trandate or metoprolol or betaloc or lopresor or nadolol or corgard or nebivolol or nebilet or hypoloc or oxprenolol or trasicor or slow-trasicor or pindolol or visken or sotalol or beta-cardone or sotacor or timolol or betim))
#704.	(MeSH DESCRIPTOR propranolol)
#705.	(MeSH DESCRIPTOR acebutolol)
#706.	(MeSH DESCRIPTOR atenolol)
#707.	(MeSH DESCRIPTOR bisoprolol)
#708.	(MeSH DESCRIPTOR celiprolol)
#709.	(MeSH DESCRIPTOR labetalol)
#710.	(MeSH DESCRIPTOR metoprolol)
#711.	(MeSH DESCRIPTOR nadolol)
#712.	(MeSH DESCRIPTOR nebivolol)
#713.	(MeSH DESCRIPTOR oxprenolol)
#714.	(MeSH DESCRIPTOR pindolol)
#715.	(MeSH DESCRIPTOR sotalol)
#716.	(MeSH DESCRIPTOR timolol)
#717.	((beta adj3 block*))
#718.	((b adj3 block*))
#719.	((beta adj2 antagonist*))
#720.	MeSH DESCRIPTOR Antithrombins
#721.	(Antithrombin*)
#722.	((thrombin adj3 inhibitor*))
#723.	MeSH DESCRIPTOR Hirudins
#724.	(Hirudin*)
#725.	(Hirulog)
#726.	(Bivalirudin)
#727.	#54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89
#728.	(#23 AND (#53 OR #90))