Late-stage assessment

GID-HTE10039 Drug-eluting coronary stents for treating coronary artery disease: late-stage assessment

Final scope

1 Introduction

The topic has been identified for late-stage assessment (LSA) by NICE, in collaboration with the Department of Health and Social Care. LSA aims to assess technologies that are in established use in the NHS. Over time, technologies in use often undergo continuous or incremental innovation and adaptation. LSA will assess whether price variations between technologies are justified by the incremental differences and advancements, and which technologies represent value for money. It will support clinical practitioners, managers and commissioners in using NHS resources as effectively as possible and ensure that patient and system benefits are maximised.

The technologies identified for this assessment are drug-eluting coronary stents available in the NHS Supply Chain framework for use in the NHS. The evaluation will assess the clinical and economic benefits and user preferences of drug-eluting stents for treating coronary artery disease to justify price variation and inform procurement decisions.

Population

Around 2.3 million people in the UK have coronary artery disease (British Heart Foundation [BHF]). In coronary artery disease, the heart's blood supply gets interrupted by a build-up of fatty substances in the coronary arteries. A typical symptom of coronary artery disease is angina (chest pain that is exacerbated by exertion). A critical reduction of the blood supply to the heart may result in myocardial infarction (heart attack) or death. To restore the

blood flow, a stent may be inserted in coronary arteries during percutaneous coronary intervention (PCI).

In 2022/23, nearly 90,000 PCIs were done in in England and Wales (The National Institute for Cardiovascular Outcomes Research [NICOR] National Audit of Percutaneous Coronary Intervention [NAPCI] summary report). PCI and stents are used in both stable angina and acute coronary syndromes (ST-segment elevation myocardial infarction [STEMI], non-ST-segment elevation myocardial infarction [NSTEMI] and unstable angina). While the number of PCI procedures for the acute coronary syndromes has remained stable since 2019/20 (before COVID-19 pandemic), the number of elective procedures for stable conditions has fallen by 20% (NICOR NAPCI summary report). In 2022/23, most PCIs, around 72%, were done for acute indications (NICOR NAPCI summary report). The mean age of people having PCI was 66 years. Most, around 75%, were men (British Cardiovascular Intervention Society [BCIS] Audit).

Use of drug-coated balloons instead of stents for specific indications (such as re-narrowing of the vessel after stenting [restenosis]) and even as an alternative to stents in new lesions is increasing. However, drug-eluting stents were used in around 83% of PCI for STEMI (called primary PCI), 84% for NSTEMI and 80% of PCI for stable conditions in 2022/23 (BCIS Audit). Stents that are used are almost exclusively drug-eluting stents and bare metal stents are no longer used. There is regional variation in the choice using drug-eluting stents and drug-coated balloons. Many people find they can do more after the procedure, and their symptoms, such as chest pain and breathlessness, get better (BHF). For people having a heart attack, it can be life-saving.

Current management

In the NHS, the current management of coronary artery disease and using drug-eluting stents follows the NICE guideline on acute coronary syndromes (NG185), NICE stable angina guideline (CG126), European Society of Cardiology [ESC] guidelines for the management of acute coronary syndromes 2023 and the European Society of Cardiology [ESC] and

European Association for Cardio-Thoracic Surgery [EACTS] guidelines on myocardial revascularisation 2018.

A full list of related NICE guidance is listed in Appendix A of this document.

Coronary angiography and PCI

In STEMI, coronary reperfusion therapy should be delivered as quickly as possible. This is a medical emergency. NICE guideline on acute coronary syndromes (NG185) recommends coronary angiography and primary PCI (if indicated), as the preferred strategy over fibrinolysis (medicines to break down blood clots), if:

- the person presents within 12 hours of onset of symptoms, and
- if primary PCI can be delivered within 120 minutes of when fibrinolysis could have been given.

Primary PCI (if indicated) should also be offered to people who present within 12 hours of the onset of STEMI symptoms with cardiogenic shock. It should be considered for people who present more than 12 hours after the onset of symptoms and have cardiogenic shock, or when there is evidence of continuing myocardial ischaemia.

If fibrinolysis is done but ECG suggests this did not restore the blood flow in the blocked vessel, immediate coronary angiography with follow-on PCI should be offered.

For multivessel disease without cardiogenic shock, where appropriate, a complete revascularisation should be offered and doing this during the index hospital admission should be considered. Treating only the culprit vessel during index admission should be considered for people with multivessel disease and cardiogenic shock.

In unstable angina or NSTEMI, NICE guideline on acute coronary syndromes (NG185) recommends offering immediate coronary angiography when people are critically unwell. But most people with unstable angina or NSTEMI have an intermediate risk of adverse cardiovascular events (predicted 6-month

mortality above 3.0%, Global Registry of Acute Cardiac Events [GRACE] risk score). So for them, if there are no contraindications to angiography such as active bleeding or comorbidity, coronary angiography with follow-on PCI is considered within 72 hours of first admission. Coronary angiography with follow-on PCI should also be considered for people who are initially assessed to be at low risk of adverse cardiovascular events (predicted 6-month mortality 3.0% or less) if they subsequently have symptoms of ischaemia or this is demonstrated by ischaemia testing.

In stable angina, NICE stable angina guideline (CG126) recommends considering coronary revascularisation, by coronary artery bypass graft (CABG) or PCI, for people whose symptoms are not satisfactorily controlled with optimal medical treatment (one or two anti-anginal drugs as necessary, plus drugs for secondary prevention of cardiovascular disease). In these circumstances, PCI is usually a planned, elective procedure.

A PCI is done in a catheter lab under local anaesthesia. A guide wire is passed into the target coronary artery, most commonly through the radial artery in the wrist but sometimes through the femoral artery in the groin, under fluoroscopic image guidance. A balloon angioplasty catheter passed over the guide wire is used to dilate the coronary artery stenosis and then removed. If a stent is used, a drug-eluting stent mounted on a balloon catheter is then passed over the guide wire into the relevant segment of the artery. It is expanded by inflation of the balloon inside it. The balloon is then deflated and removed with the guide wire. The stent acts as a scaffold to hold the vessel open. Additional intracoronary imaging (such as intravascular ultrasound [IVUS] or optical coherence tomography [OCT]) is increasingly used to guide the procedure for complex lesions. This is to further optimise positioning and deployment of the stent in the target coronary artery. In 2022/23, intracoronary imaging was used in nearly 75% of PCI for left main stem lesions (level of use across hospitals varied) (NICOR NAPCI summary report).

A PCI procedure usually takes between 30 minutes and 2 hours. People are awake throughout the procedure. For elective, planned procedures, people having a stent are usually able to go home later the same day. After an

emergency procedure, the hospital stay is usually longer. PCI with stenting is generally a painless procedure. Some people temporarily experience mild chest pain when the balloon is inflated or the stent expanded. There may be some bruising and tenderness where the catheter tube was put in. People often feel tired after the procedure but most people after a non-emergency procedure find that this goes away after a few days. After a heart attack, it will take longer to recover (BHF). Getting information about the procedure and its risks, how long stents last, and how likely it is that they may need a repeat procedure is often important to people having a stent.

Drug therapy for people having PCI

People having PCI should be offered dual antiplatelet therapy and anticoagulants. The dual antiplatelet therapy includes aspirin and a thienopyridine. The thienopyridine could be prasugrel (recommended for STEMI, the dose may be reduced for people aged 75 and over), ticagrelor (recommended for NSTEMI), or clopidogrel (recommended for stable angina and people with high bleeding risk including people taking oral anticoagulants) (NICE guideline on acute coronary syndromes [NG185], ESC guidelines for the management of acute coronary syndromes 2023, ESC/EACTS guidelines on myocardial revascularisation 2018).

In acute coronary syndromes, the dual antiplatelet therapy is usually for 12 months – in high bleeding risk (including people on oral anticoagulants), this may be abbreviated to 1, 3 or 6 months (ESC guidelines for the management of acute coronary syndromes 2023). In stable angina, dual antiplatelet therapy is usually for 1 to 12 months depending on individual bleeding and ischaemic risk benefit analysis (ESC/EACTS guidelines on myocardial revascularisation 2018).

The anticoagulant offered is unfractionated heparin. A glycoprotein IIb/IIIa inhibitor may be additionally given when clot burden is high, flow is poor or as a bailout (NICE guideline on acute coronary syndromes [NG185], ESC guidelines for the management of acute coronary syndromes 2023, ESC/EACTS guidelines on myocardial revascularisation 2018).

2 Technologies

This section describes the NHS market for drug-eluting stents as well as information on their purpose and properties. This section is based on information provided to NICE by companies, commissioning and clinical experts, and information available in the public domain.

2.1 Current NHS market for the technologies

According to NHS Spend Comparison Service data, in 2021, NHS spent over £21 million on nearly 86,000 drug-eluting coronary stents in England (GIRFT Programme National Specialty Report on Cardiology).

The cost of the drug-eluting coronary stents is covered by a set of healthcare resource group (HRG) codes and the associated NHS tariffs for PCI procedures (the HRG codes are listed in Appendix B). Therefore, they are indirectly reimbursed locally, by the integrated care boards (ICBs) for all other procedures except the primary PCI for STEMI. Primary PCI is commissioned by the NHSE Specialised Commissioning. So, the Specialised Commissioning indirectly funds the drug-eluting coronary stents used for primary PCI.

Drug-eluting coronary stents are not in the Specialised Services Devices programme and so there is no central, nationwide supply route for them in the NHS. The NHS Supply Chain holds a framework contract for interventional cardiology (Lot 1 of NHS Supply Chain framework for Interventional Cardiology, Interventional Radiology and Interventional Neuroradiology, Cardiac Rhythm Management and Electrophysiology). Drug-eluting stents within the framework are available to the NHS with agreed pricing to purchase without trusts having to go out to a full tender on the products. In 2023, around 65% of the drug-eluting stents spend within NHS went through the NHS Supply Chain. The current framework contract is valid until 26 February 2027 (considering all extension options). NHS trusts or groups of trusts joined for procurement purposes, either independently or supported by NHS Supply Chain or by external contract management organisations, may negotiate further contracts with stent suppliers. These contracts may include pricing based on for example the expected market share within the trust (centralising

suppliers) or bundling of stents with different types of PCI devices or larger capital equipment. These contracts typically include 2 to 3 drug-eluting stents that can be used across various types of lesions. Some room, for example 10% of the contract, may be left for more specialised stents. Interventional cardiologists are often involved in the purchasing decisions.

2.2 Description of the technologies

The technologies included in this evaluation are limited to drug-eluting coronary stents expected to be available on the NHS Supply Chain framework for at least the next 12 months. Table 1 lists these 29 stents. Drug-eluting stents with a bioresorbable scaffold (fully-bioabsorbable stent) on the framework are excluded from this evaluation because current guidance is that they should be used only in the context of research (NICE guidance on bioresorbable stent implantation [IPG732]) and are not commissioned for routine use.

Each drug-eluting stent has an instruction for use (IFU) document that includes the indications for which the device can be used. The indications for use vary and may or may not specify subpopulations or lesion types that are included in the indication for use. They often specify the sizes of vessels (diameter or length or both) the stent can be used for. Because of their specific subpopulation or lesion type indications or certain design features, in some hospitals they are purchased for or used in mainly those specific cases.

The following list of technologies included in this evaluation is not exhaustive. Other technologies may be available to the NHS currently or in the future.

Table 1 Drug-eluting stents in the NHS Supply Chain framework

Manufacturer	Technology	Scaffold material	Polymer type	Drug
Abbott Medical	XIENCE PRO 48	Cobalt chromium	Durable	Everolimus
Abbott Medical	XIENCE PRO S	Cobalt chromium	Durable	Everolimus
Abbott Medical	Skypoint	Cobalt chromium	Durable	Everolimus

Abbott Medical	XIENCE Skypoint 48	Cobalt chromium	Durable	Everolimus
Abbott Medical	XIENCE Skypoint LV	Cobalt chromium	Durable	Everolimus
B. Braun Medical	Coroflex ISAR NEO	Cobalt chromium	Polymer-free	Sirolimus
Biosensors International	BioFreedom	Stainless steel	Polymer-free	Biolimus A9
Biosensors International	BioMatrix Alpha	Cobalt chromium	Biodegradable	Biolimus A9
Biosensors International	BioFreedom Ultra	Cobalt chromium	Polymer-free	Biolimus A9
Biotronik	Orsiro Mission	Cobalt chromium	Biodegradable	Sirolimus
Biotronik	Synsiro Pro	Cobalt chromium	Biodegradable	Sirolimus
Boston Scientific	Promus ELITE	Platinum chromium	Durable	Everolimus
Boston Scientific	Synergy MEGATRON	Platinum chromium	Biodegradable	Everolimus
Boston Scientific	Synergy XD	Platinum chromium	Biodegradable	Everolimus
Cardionovum	XLIMUS	Cobalt chromium	Biodegradable	Sirolimus
IHT	ihtDEStiny BD	Cobalt chromium	Biodegradable	Sirolimus
iVascular	Angiolite	Cobalt chromium	Durable	Sirolimus
Medtronic	Onyx Frontier	Cobalt chromium, platinum-iridium core	Durable	Zotarolimus
Meril	BioMime	Cobalt chromium	Biodegradable	Sirolimus
Meril	BioMime Branch	Cobalt chromium	Biodegradable	Sirolimus
Meril	BioMime Morph	Cobalt chromium	Biodegradable	Sirolimus
Meril	EverMine 50	Cobalt chromium	Biodegradable	Everolimus
Microport	Firehawk	Cobalt chromium	Biodegradable	Sirolimus
Microport	Firehawk Liberty	Cobalt chromium	Biodegradable	Sirolimus
QualiMed	MAGMA	Stainless steel	Biodegradable	Sirolimus
Sahajanand Medical Technologies	Supraflex	Cobalt chromium	Biodegradable	Sirolimus
Sahajanand Medical Technologies	Supraflex Cruz	Cobalt chromium	Biodegradable	Sirolimus

Terumo	Ultimaster Nagomi	Cobalt chromium	Biodegradable	Sirolimus
Terumo	Ultimaster Tansei	Cobalt chromium	Biodegradable	Sirolimus

2.3 Technology features

Basic technology features

The features of a drug-eluting stent make the stent an implantable scaffold to open up the artery, while minimising the risk of the artery re-narrowing. Drug-eluting stents are made from metal such as stainless steel, platinum-chromium or cobalt-chromium (Table 1). They have a coating of a drug, usually a type of antiproliferative drug. The drug varies between the stents (Table 1). The drug prevents scar tissue growing between the gaps in the stent and the artery from re-narrowing.

Additional features, adaptions, and potential innovations

In some stents, with the aim of controlling the release of the drug, the drug is applied on a polymer (Table 1). To try to reduce potential inflammatory reaction and optimise healing, the polymer coating and drug release may be over the entire surface of the stent (conformal) or on the surface in contact with the vessel wall (abluminal). Durable polymers may have characteristics that aim to encourage faster healing. For this same aim, some stents are polymer-free (these may have a substance like probucol as an excipient or vehicle for the antiproliferative drug). Some polymers are absorbable and disappear after all the drug has been released. The drug dose and the release or elution time vary between the stents. Some stents may be indicated with reduced 1-month dual antiplatelet therapy in specific populations, such as people with high bleeding risk.

The mechanical properties of the stent scaffold or matrix such as the thickness of the stent struts and the strut design or architecture may differ. These may affect, for example, the radial strength (dependent on number of crowns), longitudinal compressibility, elastic recoil (change in the stent outer diameter from the expanded stent on the delivery system under inflation

pressure to the stents relaxed diameter after deflating the balloon), foreshortening (change in stent length from its crimped state upon deployment, fracture resistance, side branch access (open vs closed cell design), cell size, overexpansion capability, crossing profile or flexibility and deliverability. The properties of the delivery system that is part of the stent (removed after insertion) may also affect how easy it is to get to the target vessel and lesion. The mechanical properties of the stent may affect how well the stent can be seen under fluoroscopy. In some stents, there may be features that aim to increase the visibility to help improve the accuracy of positioning the stent. The stent may be available for a wide range of diameters and lengths or across a narrower range (size matrix).

Some stents may have a wide range of indications and evidence of performance in specific populations, such as people with more arterial calcification (more common with age), people with diabetes, people with left main stem lesions, people with STEMI or people with high risk of bleeding.

Some features may affect how well the stent is suited for use in certain populations or for treating certain types of lesions. Some features may sometimes be the difference between being able to do a procedure or not.

3 Decision problem

Population	People having PCI (including primary PCI) and for whom drug-eluting stent is indicated for treating coronary artery disease (including stable angina, STEMI, unstable angina or NSTEMI) Where data permits, the following subgroups may be considered: • Women • Ethnicity (important subgroups are discussed in section 3.1) • People with left main stem lesions • People with bifurcation lesions • People with high bleeding risk • People with diabetes
Interventions	Drug-eluting coronary stents: • XIENCE PRO 48 • XIENCE PRO S • Skypoint

	• XIENCE Skypoint 48 • Xience Skypoint LV • Coroflex ISAR NEO • BioFreedom • BioMatrix Alpha • BioFreedom Ultra • Orsiro Mission • Synsiro Pro • Promus ELITE • Synergy MEGATRON • Synergy XD • XLIMUS • ihtDEStiny BD • Angiolite • Onyx Frontier • BioMime • BioMime Branch • BioMime Morph • EverMine 50 • Firehawk • Firehawk Liberty • MAGMA • Supraflex • Supraflex Cruz • Ultimaster Nagomi • Ultimaster Tansei
Comparator(s)	A drug-eluting stent or stents or a type or types of drug-eluting stent that is considered the current standard of care in the NHS (for example the drug-eluting stent is widely being used as the comparator in non-inferiority trials on drug-eluting stents). The comparator may differ between subgroups.
Healthcare setting	Secondary care, tertiary care
Outcomes	Outcome measures for consideration may include but are not limited to: Intermediate outcomes: • Accurate stent positioning (related to visibility under fluoroscopy) • Ability to deliver the stent • Acute procedural success • Procedure and fluoroscopy time • Amount of contrast used Patient reported outcomes:

	• Health-related quality of life • Symptom relief (for example angina relief) Costs and resource use: • Cost of technologies • Cost of staff training • Cost of further diagnostic tests (for example pressure wire and IVUS or OCT guided PCI) • Cost of treatment (including costs of any adverse events, retreatment and for example lesion modifying therapy such as rotational and orbital atherectomy or intravascular lithotripsy) Clinical outcomes: • Intervention related adverse events • Major Adverse Cardiac Events (MACE) • Bleeding • Target lesion or vessel failure • Acute and chronic stent failure • Target lesion and target vessel revascularisation • Restenosis • Stent thrombosis • Myocardial infarction • Patient orientated cardiovascular events (POCE, a composite of ischemic and bleeding events, see Academic Research Consortium for definition) • All-cause mortality • Cardiac mortality Outcomes and criteria that users consider important when making decisions on which technology to use will be based on the principles of multi-criteria decision analysis if considered appropriate for the assessment.
Economic analysis	A health economic model will be developed, where possible, comprising a cost-comparison or cost utility analysis. Costs will be considered from an NHS and Personal Social Services perspective. Sensitivity and scenario analysis should be done to address the relative effect of parameter or structural uncertainty on results. The time horizon should be long enough to reflect all important differences in costs or outcomes between the technologies being compared.
Existing UK registries	• A registry that is potentially relevant and may help inform this assessment is the National Institute for Cardiovascular Outcomes Research (NICOR) collects data and produces analysis to enable hospitals and healthcare improvement

	bodies to monitor and improve the quality of care and outcomes of cardiovascular patients. • BCIS collects and analyses annual survey data from PCI centres in the UK. • Registry data may not capture all the population or lesion characteristics that are important for consideration of clinical effectiveness, these may be more fully recorded in trial data. • Some drug-eluting coronary stent manufacturers may have large registries or cohorts in the UK. These would include only the manufacturer's stents.
Other considerations	• Key evidence on the included technologies may be on their previous versions (not included in the scope if they are no longer available through the NHS Supply Chain framework), this evidence should be considered where clinical equivalence between versions is claimed. • Where no evidence is available on a technology comparing it to another drug-eluting stent, key evidence that includes another comparator could be considered.

3.1 Potential equality issues or considerations

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others.

Prevalence rates of coronary artery disease are higher in men and older people (aged over 65 years). But women are underdiagnosed, may have different symptoms to men, and are less likely to receive heart treatments such as PCI (National Heart, Lung and Blood Institute). Some underlying risk factors for coronary artery disease are more common in some ethnic groups, such as people with type 2 diabetes in South Asian, African Caribbean or Black Asian groups and hypertension in Black African or Black Caribbean groups. Clinical experts noted that they see people from Black African, Black Caribbean and East Asian groups with symptoms of coronary artery disease that tend to be 5 to 10 years younger than people from European groups. Prevalence and mortality of coronary artery disease is higher in people from lower socioeconomic groups. People with advanced coronary artery disease may be covered under disability legislation in the Equality Act 2010 if symptoms substantially affect the ability to carry out day to day activities for

longer than 12 months. Many may have a co-existing long-term condition. PCI outcomes for women may be worse because they tend to have smaller vessels. Women are also underrepresented in clinical trials of stents.

PCI outcomes for women may be worse because they tend to have smaller vessels. Women are also underrepresented in clinical trials of stents. Some underlying risk factors for coronary artery disease are more common in some ethnic groups, such as people with type 2 diabetes in South Asian, African Caribbean or Black Asian groups and hypertension in Black African or Black Caribbean groups. PCI outcomes for people from South East Asian groups may be worse because they tend to have smaller vessels. Stent failure in people with type 2 diabetes is more common. There is also limited data to support decision making in different ethnic groups. For example, in the NICOR data, only 70% of the people have their ethnicity recorded (BCIS Audit). Stent failure in people with type 2 diabetes is more common. Prevalence and mortality of coronary artery disease is higher in people from lower socioeconomic groups.

Dual antiplatelet therapy is needed for some time following a coronary stent implantation. People with mental health problems, or learning difficulties, or people who do not speak English (if translation is not available) may find it difficult to take the medication regularly or to understand how to follow the therapy.

Safety and effectiveness of stents has not been established for pregnant women, women nursing or for children. But clinical experts noted that PCI involving drug-eluting stents or drug-coated balloons would likely still be used in pregnant or breastfeeding women following myocardial infarction.

4 NICE team

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Appendix A Related NICE Guidance

- Acute coronary syndromes (2020). NICE guideline 185.
- Acute coronary syndromes in adults (2014, last updated 2020) NICE quality standard 68.
- Bioresorbable stent implantation to treat coronary artery disease (2022). NICE interventional procedures guidance 732.
- Coronary artery stents (2003, last updated 2020). NICE technology appraisal guidance 71.
- Drug-eluting stents for the treatment of coronary artery disease (2008, last updated 2020). NICE technology appraisal guidance 152.
- Stable angina (2011, last updated 2016). NICE clinical guideline 126.
- Stable angina (2012, last updated 2017) NICE quality standard 21.

Appendix B HRG codes for procedures that may include drug-eluting stents

HRG code	HRG name
EY40A	Complex Percutaneous Transluminal Coronary Angioplasty with CC Score 12+
EY40B	Complex Percutaneous Transluminal Coronary Angioplasty with CC Score 8-11
EY40C	Complex Percutaneous Transluminal Coronary Angioplasty with CC Score 4-7
EY40D	Complex Percutaneous Transluminal Coronary Angioplasty with CC Score 0-3
EY41A	Standard Percutaneous Transluminal Coronary Angioplasty with CC Score 12+
EY41B	Standard Percutaneous Transluminal Coronary Angioplasty with CC Score 8-11
EY41C	Standard Percutaneous Transluminal Coronary Angioplasty with CC Score 4-7
EY41D	Standard Percutaneous Transluminal Coronary Angioplasty with CC Score 0-3
EY42A	Complex Cardiac Catheterisation with CC Score 7+
EY42B	Complex Cardiac Catheterisation with CC Score 4-6
EY42C	Complex Cardiac Catheterisation with CC Score 2-3
EY42D	Complex Cardiac Catheterisation with CC Score 0-1
EY43A	Standard Cardiac Catheterisation with CC Score 13+
EY43B	Standard Cardiac Catheterisation with CC Score 10-12
EY43C	Standard Cardiac Catheterisation with CC Score 7-9
EY43D	Standard Cardiac Catheterisation with CC Score 4-6
EY43E	Standard Cardiac Catheterisation with CC Score 2-3
EY43F	Standard Cardiac Catheterisation with CC Score 0-1
EY44A	Very Complex Percutaneous Transluminal Coronary Angioplasty with CC Score 12+
EY44B	Very Complex Percutaneous Transluminal Coronary Angioplasty with CC Score 8-11
EY44C	Very Complex Percutaneous Transluminal Coronary Angioplasty with CC Score 4-7
EY44D	Very Complex Percutaneous Transluminal Coronary Angioplasty with CC Score 0-3

Appendix C Abbreviations

CABG	Coronary artery bypass graft
ESC	European Society of Cardiology
EACTS	European Association for Cardio-Thoracic Surgery
ICB	Integrated care board
LSA	Late-stage assessment
NAPCI	National Audit of Percutaneous Coronary Intervention
NICOR	The National Institute for Cardiovascular Outcomes Research
NSTEMI	non-ST-segment elevation myocardial infarction
PCI	Percutaneous coronary intervention
STEMI	ST-segment elevation myocardial infarction