BSC6.02	Elective Percutaneous Coronary Intervention (PCI)		
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Section:	7.0 Surgery	**Page:**	Page 1 of 22

Policy Statement

The medical necessity criteria outlined in this document govern the appropriate use of non-emergent coronary revascularizations in general but focuses on non-emergent percutaneous coronary interventions (PCI) in particular.

This medical policy is not intended to address prior authorization of PCI for acute coronary syndrome (ACS) meeting the definitions as noted in the Policy Guidelines section below for more details. However, services provided without prior authorization (including inpatient care) are subject to post service review and are also subject to the criteria and definitions in this policy. Documentation of why the individual is thought to have ACS or other acute indications are required to meet criteria.

I. **Elective** (NOT emergent) coronary revascularization utilizing percutaneous coronary intervention for non-acute, stable coronary artery disease may be considered **medically necessary** when **both** of the following criteria are met:
   A. Documentation of clinical evaluation includes **all** of the following[2,3,4,5]:
      1. The individual exhibits chronic symptoms of Class I, II, III or IV angina (Canadian Cardiovascular Society [CCS] Grading of Angina Pectoris, Class I, II, III or IV, [see Policy Guidelines section]), that persist despite optimal antianginal medical therapy (OAMT;) (see Policy Guidelines section), as tolerated, which includes at minimum use of three of four anti-anginal classes of agents (i.e., beta blockers, calcium channel blockers, sodium channel blockers, nitrates)
      2. Symptomatic individuals with 1 or more severe (greater than or equal to 70% diameter) epicardial (non-left main) artery or intermediate (50 to 69% diameter) left main coronary artery stenosis detected by diagnostic coronary angiography (see Policy Guidelines section), or with a Fractional Flow Reserve (FFR) using Coronary Computed Tomography Angiography (CCTA) of less than or equal to 0.80
   B. Utilizing the ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS 2017 Appropriate Use Criteria (AUC) for Coronary Revascularization in individuals with Stable Ischemic Heart Disease (SIHD), a rated level of appropriateness and the specific clinical scenario (e.g., one-vessel disease, two-vessel disease, three-vessel disease, left main disease, SIHD with prior CABG) must be documented in the medical record:
      1. The "appropriate use" score is rated level 7 – 9
      2. The "appropriate use" score is rated level is 4 – 6 ("may be appropriate") or 1 – 3 ("rarely appropriate") and includes a brief narrative in the medical record describing the clinical scenario(s) justifying the revascularization procedure. Clinical risk factors which may support the procedure include prior PCI or CABG procedure.

II. Elective coronary revascularization for non-acute, stable coronary artery disease is considered **not medically necessary** for all other indications, including if the individual is unwilling to comply with recommended medical therapy, or if the individual is unlikely to benefit from the proposed procedure (e.g., limited life expectancy from concomitant disease).

NOTE: Refer to Appendix A to see the policy statement changes (if any) from the previous version.

Policy Guidelines

Emergent catheterization to treat an acute coronary syndrome does NOT require prior authorization.

Percutaneous coronary interventions (PCI) are non-surgical procedures performed using vascular access through skin which restores patency of diseased coronary arteries, performed with or without coronary stent implantation. For the sake of this policy, this includes coronary atherectomy for the treatment of coronary artery disease (CAD). Elective surgical revascularization procedures, (e.g., coronary artery bypass grafting [CABG] procedures), if reviewed, must meet these elective coronary revascularization criteria, and also meet appropriateness criteria for use of the surgical approach (see Policy Guidelines section).

Acute indications for PCI are defined as those performed in the setting of an acute coronary syndrome, including unstable angina (see Policy Guidelines section below).[7] Findings from studies comparing PCI with coronary bypass grafting (CABG) suggest that in most individuals with acute CAD with multi-vessel disease or isolated proximal left anterior stenosis amenable to either treatment, CABG led to a significantly lower long-term incidence of ischemic events and the need for repeat interventions. CABG is recommended for individuals with more severe disease involving large areas of the myocardium supplied by occluded vessels or significant left main coronary artery disease.

Acute Coronary Syndrome

- ST-elevation myocardial infarction (STEMI)
- Non-ST elevation myocardial infarction (NSTEMI)
- Unstable angina

Unstable angina

- Typical* (see table below) angina/ischemic symptoms suggestive of ACS but without troponin elevation (or only minimal elevation), with ECG (electrocardiogram) changes indicative of ischemia (e.g., ST segment depression or transient elevation; or new T wave inversion).
- Angina at rest: pain of typical* nature but for prolonged periods of time (i.e., >20 minutes); CCS grade IV
- New onset angina: recent (i.e., < 2 months) onset of severe angina (CCS grade III). Angina that occurs for the first time with heavy or moderate exertion and subsides with rest would be considered to be CCS grade I or II (see below in Guidelines section) and should undergo maximal medical therapy as a first step.
- Crescendo angina: previous typical angina that progressively increases over a short period of time in severity/intensity and at a lower level of exertion.

Note: Other types of angina are not considered to be unstable

Table PG1. Traditional Clinical Classification of Suspected Anginal Symptoms

***Typical angina**	Meets the following three characteristics: (i) Constricting discomfort in the front of the chest or in the neck, jaw, shoulder, or arm; (ii) Precipitated by physical exertion; (iii) Relieved by rest or nitrates within 5 min.
Atypical angina	Meets two of these characteristics.
Non-anginal chest pain	Meets only one or none of these characteristics.

Related to clinical scenarios listed in this policy, a "significant" coronary stenosis for an epicardial (non-left main) artery is equal to or greater than 70% luminal diameter narrowing by visual assessment, as assessed in the "worst view" projection. For a left main stenosis, greater or equal to 50% narrowing is required.

If questions of the degree of stenosis by visual estimation are encountered, fractional flow reserve (FFR) across the stenosis may be used as an indicator of stenosis severity. With an FFR of 1.0 is widely accepted as normal, an FFR lower than 0.75-0.80 is generally considered to be associated with significant stenosis/myocardial ischemia. Intravascular plaque morphology resulting in significant stenosis may also be determined by intravascular ultrasound (IVUS).

This medical policy guidance is principally derived from a 2017 report of the American College of Cardiology Appropriate Use Criteria Task Force (ACC), American Association for Thoracic Surgery (AATS), American Heart Association (AHA), American Society of Echocardiography (ASE), American Society of Nuclear Cardiology (ASNC), Society for Cardiovascular Angiography Interventions (SCAI), Society of Cardiovascular Computed Tomography (SCCT), Society of Thoracic Surgeons (STS), **Appropriate Use Criteria (AUC) for Coronary Revascularization in Patients with Stable Ischemic Heart Disease (SIHD),** as published in the Journal of the American College of Cardiology.[1]

Preferential Use of Coronary Artery Bypass Grafting Over Percutaneous Coronary Interventions
In certain complex clinical circumstances, including but not limited to two-vessel disease including left anterior descending stenosis, three-vessel disease, left main stenosis, or prior bypass surgery, revascularization itself is generally thought to be appropriate, but the use of percutaneous procedures may or may not be considered medically appropriate (See Tables listed in the Policy Guidelines section below). In these cases, coronary artery bypass surgery becomes medically necessary instead of PCI, therefore, additional documentation is required to justify use of PCI over CABG.

According to Singh et al other factors may influence the choice of revascularization procedures, and may be considered in appropriateness decision-making. In general, CABG is preferred in cases in which significant blockage is present in several sites in the same artery, where SYNTAX scores (see below for definition) are high, and in individuals in whom there is a history of diabetes, excessive bleeding, aspirin (or clopidogrel) allergy, or left ventricular systolic dysfunction (with an ejection fraction of less than 45% or documented diastolic dysfunction). On the other hand, in cases of high stroke risk, dementia, previous CABG, or significant pulmonary disease, PCI may be preferable.[6]

Canadian Cardiovascular Society Grading of Angina Pectoris
The reference standard used for the grading of angina severity is the Canadian Cardiovascular Society system:

- **Grade I**: Ordinary physical activity does not cause angina, such as walking and climbing stairs. Angina with strenuous or rapid or prolonged exertion at work or recreation.
- **Grade II**: Slight limitation of ordinary activity. Walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals, or in cold, or in wind, or under emotional stress, or only during the few hours after awakening. Walking more than two blocks on the level and climbing more than one flight of ordinary stairs at a normal pace and in normal conditions.
- **Grade III**: Marked limitation of ordinary physical activity. Walking one or two blocks on the level and climbing one flight of stairs in normal conditions and at normal pace.
- **Grade IV**: Inability to carry on any physical activity without discomfort, anginal syndrome may be present at rest.

Optimal Intensity of Anti-Anginal Therapy
Maximal anti-anginal therapy (referred to as "Optimal Medical Therapy" elsewhere in this document) consists of the continuous use of drugs from at least three of four anti-anginal classes (beta blockers,

calcium channel blockers, sodium channel blockers, nitrates) titrated to maximal efficacy and/or tolerance. Minimal therapy is use of one class of anti-anginal drugs. ACC/AHA guidelines suggest that beta-blockers should be considered as initial therapy for chronic stable angina. Current practice guidelines indicate low- risk individuals with chronic stable angina should be treated initially with optimal medical therapy (OMT) and lifestyle modification. An assumption is made that agents to treat hypertension and hyperlipidemia, as well as anti-platelet agents, are in use as indicated and are also titrated to maximally efficacious and/or tolerated effect.

Table PG2: Anti-Anginal Therapy and Optimal Dose Range*

*in individuals without kidney impairment, liver impairment, or rhythm related disorders

Therapeutic Class	Medication Name and Optimal Dose Range
Beta Blockers	• Metoprolol Tartrate: 50-200mg twice daily • Metoprolol Succinate: 100-400mg daily • Atenolol: 50-200mg daily • Carvedilol: 25 to 50mg total daily dose • Bisoprolol: 2.5-10mg daily • Propranolol: 80-320mg total daily dose • Nadolol: 40-240mg daily • Pindolol (off-label): 5mg-30mg twice daily • Acebutolol (off-label): 200mg three times daily, 1200mg maximum daily dose Goal: Titrate to maximum tolerated dose, resolution of angina, resting heart rate < 60
Non-Dihydropyridine Calcium Channel Blockers	• Diltiazem: 240-360mg total daily dose • Verapamil (Extended Release): 180-480mg total daily dose Goal: Titrate to maximum tolerated dose, resolution of angina, resting heart rate < 60
Dihydropyridine Calcium Channel Blockers	• Amlodipine: 5-10mg daily • Felodipine: 5-10mg daily • Nifedipine: 30-120mg daily • Isradipine (off-label): 2.5mg-10mg twice daily • Nicardipine: 20-40mg three times daily Goal: Titrate to maximum tolerated dose, resolution of angina
Nitrates	• Isosorbide Mononitrate (Extended Release): 60-120mg daily • Isosorbide Dinitrate (Immediate Release): 10-80mg three times daily • Isosorbide Dinitrate (Sustained Release): 40-160mg daily Goal: Titrate to maximum tolerated dose, resolution of angina
Sodium channel blockers	• Ranolazine 500mg-1000mg twice daily Goal: Titrate to maximum tolerated dose or resolution of angina

Appropriate Use Criteria for Coronary Revascularization

The table below is taken directly from the "ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS 2017 Appropriate Use Criteria (AUC) for Coronary Revascularization in patients with Stable Ischemic Heart Disease (SIHD)" and is to be used for the determination of "appropriate use" in this policy. In the "Appropriate Use Score" columns, Roman numerals I, II, III and IV refer to Canadian Cardiovascular Society angina scores.[1]

Appropriate Use Criteria for Coronary Revascularization abbreviations

- AA = antianginal
- ACS = acute coronary syndrome
- AUC = appropriate use criteria
- BB = beta-blockers
- CABG = coronary artery bypass graft
- CAD = coronary artery disease
- FFR = fractional flow reserve
- IMA = internal mammary artery
- LAD = left anterior descending coronary artery
- LVEF = left ventricular ejection fraction
- PCI = percutaneous coronary intervention
- SIHD = stable ischemic heart disease

Table PG3. Revascularization to Improve Survival Compared with Medical Therapy

Anatomic Setting	COR	LOE
UPLM or complex CAD		
CABG and PCI	I—Heart Team approach recommended	C
CABG and PCI	IIa—Calculation of STS and SYNTAX scores	B
UPLM*		
CABG	I	B
PCI	IIa—For SIHD when both of the following are present: ▪ Anatomic conditions associated with a low risk of PCI procedural complications and a high likelihood of good long-term outcome (e.g., a low SYNTAX score of ≤22, ostial or trunk left main CAD) ▪ Clinical characteristics that predict a significantly increased risk of adverse surgical outcomes (e.g., STS-predicted risk of operative mortality ≥5%)	B
	IIa—For UA/NSTEMI if not a CABG candidate	B
	IIa—For STEMI when distal coronary flow is TIMI flow grade <3 and PCI can be performed more rapidly and safely than CABG	C
	IIb—For SIHD when both of the following are present: ▪ Anatomic conditions associated with a low to intermediate risk of PCI procedural complications and an intermediate to high likelihood of good long-term outcome (e.g., low-intermediate SYNTAX score of <33, bifurcation left main CAD) ▪ Clinical characteristics that predict an increased risk of adverse surgical outcomes (e.g., moderate—severe COPD, disability from prior stroke, or prior cardiac surgery; STS-predicted operative mortality >2%)	B
	III: Harm—For SIHD in patients (versus performing CABG) with unfavorable anatomy for PCI and who are good candidates for CABG	B
3-vessel disease with or without proximal LAD artery disease*		
CABG	I	B
	IIa—It is reasonable to choose CABG over PCI in patients with complex 3-vessel CAD (e.g., SYNTAX score >22) who are good candidates for CABG.	B
PCI	IIb—Of uncertain benefit	B
2-vessel disease with proximal LAD artery disease*		
CABG	I	B
PCI	IIb—Of uncertain benefit	B
2-vessel disease without proximal LAD artery disease*		
CABG	IIa—With extensive ischemia	B
	IIb—Of uncertain benefit without extensive ischemia	C
PCI	IIb—Of uncertain benefit	B

Anatomic Setting	COR	LOE
1-vessel proximal LAD artery disease		
CABG	IIa—With LIMA for long-term benefit	B
PCI	IIb—Of uncertain benefit	B
1-vessel disease without proximal LAD artery involvement		
CABG	III: Harm	B
PCI	III: Harm	B
LV dysfunction		
CABG	IIa—EF 35% to 50%	B
CABG	IIb—EF <35% without significant left main CAD	B
PCI	Insufficient data	
Survivors of sudden cardiac death with presumed ischemia-mediated VT		
CABG	I	B
PCI	I	C
No anatomic or physiological criteria for revascularization		
CABG	III: Harm	B
PCI	III: Harm	B

COR: Class of Recommendation; LOE: Level of Evidence

Table PG3.1 One-Vessel Disease

Appropriate Use Score (1-9)
One-Vessel Disease

	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**
No Proximal LAD or Proximal Left Dominant LCX Involvement								
1. ■ Low-risk findings on noninvasive testing	R (2)	R (3)	R (3)	R (2)	M (4)	R (3)	A (7)	M (5)
2. ■ Intermediate- or high-risk findings on noninvasive testing	M (4)	R (3)	M (5)	M (4)	M (6)	M (4)	A (8)	M (6)
3. ■ No stress test performed or, if performed, results are indeterminate ■ FFR ≤0.80*	M (4)	R (2)	M (5)	R (3)	M (6)	M (4)	A (8)	M (6)
Proximal LAD or Proximal Left Dominant LCX Involvement Present								
4. ■ Low-risk findings on noninvasive testing	M (4)	R (3)	M (4)	M (4)	M (5)	M (5)	A (7)	A (7)
5. ■ Intermediate- or high-risk findings on noninvasive testing	M (5)	M (5)	M (6)	M (6)	A (7)	A (7)	A (8)	A (8)
6. ■ No stress test performed or, if performed, results are indeterminate ■ FFR ≤0.80	M (5)	M (5)	M (6)	M (6)	M (6)	M (6)	A (8)	A (7)

The number in parentheses next to the rating reflects the median score for that indication. *iFR measurements with appropriate normal ranges may be substituted for FFR.
A indicates appropriate; AA = antianginal; BB = beta blockers; CABG = coronary artery bypass graft; FFR = fractional flow reserve; iFR = instant wave-free ratio; LAD = left anterior descending coronary artery; LCX = left circumflex artery; M = may be appropriate; PCI = percutaneous coronary intervention; and R = rarely appropriate.

Table PG3.2 Two-Vessel Disease

Appropriate Use Score (1-9)
Two-Vessel Disease

	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**
No Proximal LAD Involvement								
7. ■ Low-risk findings on noninvasive testing	R (3)	R (2)	M (4)	R (3)	M (5)	M (4)	A (7)	M (6)
8. ■ Intermediate- or high-risk findings on noninvasive testing	M (5)	M (4)	M (6)	M (5)	A (7)	M (6)	A (8)	A (7)
9. ■ No stress test performed or, if performed, results are indeterminate ■ FFR ≤0.80* in both vessels	M (5)	M (4)	M (6)	M (4)	A (7)	M (5)	A (8)	A (7)
Proximal LAD Involvement and No Diabetes Present								
10. ■ Low-risk findings on noninvasive testing	M (4)	M (4)	M (5)	M (5)	M (6)	M (6)	A (7)	A (7)
11. ■ Intermediate- or high-risk findings on noninvasive testing	M (6)	M (6)	A (7)	A (7)	A (7)	A (7)	A (8)	A (8)
12. ■ No stress test performed or, if performed, results are indeterminate ■ FFR ≤0.80 in both vessels	M (6)	M (6)	M (6)	M (6)	A (7)	A (7)	A (8)	A (8)
Proximal LAD Involvement with Diabetes Present								
13. ■ Low-risk findings on noninvasive testing	M (4)	M (5)	M (4)	M (6)	M (6)	A (7)	A (7)	A (8)
14. ■ Intermediate- or high-risk findings on noninvasive testing	M (5)	A (7)	M (6)	A (7)	A (7)	A (8)	A (8)	A (9)
15. ■ No stress test performed or, if performed, results are indeterminate n FFR ≤0.80 in both vessels*	M (5)	M (6)	M (6)	A (7)	A (7)	A (8)	A (7)	A (8)

The number in parentheses next to the rating reflects the median score for that indication. *iFR measurements with appropriate normal ranges may be substituted for FFR.
A indicates appropriate; AA, antianginal; BB, beta blockers; CABG, coronary artery bypass graft; FFR, fractional flow reserve; iFR, instant wave-free ratio; LAD, left anterior descending coronary artery; M, may be appropriate; PCI, percutaneous coronary intervention; and R, rarely appropriate.

Table PG3.3 Three-Vessel Disease

Appropriate Use Score (1-9)
Three-Vessel Disease

	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**
Low Disease Complexity (e.g., Focal Stenosis, SYNTAX ≤22)								
16. ■ Low-risk findings on noninvasive testing ■ No diabetes	M (4)	M (5)	M (5)	M (5)	M (6)	M (6)	A (7)	A (7)
17. ■ Intermediate- or high-risk findings on noninvasive testing ■ No diabetes	M (6)	A (7)	A (7)	A (7)	A (7)	A (8)	A (8)	A (8)
18. ■ Low-risk findings on noninvasive testing ■ Diabetes present	M (4)	M (6)	M (5)	M (6)	M (6)	A (7)	A (7)	A (8)

Table PG3.3 Three-Vessel Disease (Cont.)

Appropriate Use Score (1-9)
Three-Vessel Disease

	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**
Low Disease Complexity (e.g., Focal Stenosis, SYNTAX ≤22)								
19. ■ Intermediate- or high-risk findings on noninvasive testing ■ Diabetes present	M (6)	A (7)	M (6)	A (8)	A (7)	A (8)	A (7)	A (9)
Intermediate or High Disease Complexity (e.g. Multiple Features of Complexity as Noted Previously, SYNTAX >22)								
20. ■ Low-risk findings on noninvasive testing ■ No diabetes	M (4)	M (6)	M (4)	A (7)	M (5)	A (7)	M (6)	A (8)
21. ■ Intermediate- or high-risk findings on noninvasive testing ■ No diabetes	M (5)	A (7)	M (6)	A (7)	M (6)	A (8)	M (6)	A (9)
22. ■ Low-risk findings on noninvasive testing ■ Diabetes present	M (4)	A (7)	M (4)	A (7)	M (5)	A (8)	M (6)	A (9)
23. ■ Intermediate- or high-risk findings on noninvasive testing ■ Diabetes present	M (4)	A (8)	M (5)	A (8)	M (5)	A (8)	M (6)	A (9)

The number in parentheses next to the rating reflects the median score for that indication.
A indicates appropriate; AA = antianginal; BB = beta blockers; CABG = coronary artery bypass graft; M = may be appropriate; PCI = percutaneous coronary intervention; and SYNTAX = Synergy between PCI with Taxus and Cardiac Surgery trial.

Table PG3.4 Left Main Coronary Artery Stenosis

Appropriate Use Score (1-9)
Left Main Disease

	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**
24. ■ Isolated LMCA disease ■ Ostial or midshaft stenosis	M (6)	A (8)	A (7)	A (8)	A (7)	A (9)	A (7)	A (9)
25. ■ Isolated LMCA disease ■ Bifurcation involvement	M (5)	A (8)	M (5)	A (8)	M (5)	A (9)	M (6)	A (9)
26. ■ LMCA disease ■ Ostial or midshaft stenosis ■ Concurrent multivessel disease ■ Low disease burden (e.g., 1–2 additional focal stenosis, SYNTAX score >22)	M (6)	A (8)	M (6)	A (9)	A (7)	A (9)	A (7)	A (9)
27. ■ Ostial or midshaft stenosis ■ Concurrent multivessel disease ■ Intermediate or high disease burden (e.g., 1–2 additional bifurcation stenosis, long stenosis, SYNTAX score >22)	M (4)	A (9)	M (4)	A (9)	M (4)	A (9)	M (4)	A (9)
28. ■ LMCA disease ■ Bifurcation involvement	M (4)	A (8)	M (5)	A (8)	M (5)	A (9)	M (6)	A (9)

Appropriate Use Score (1-9) Left Main Disease								
■ Low disease burden in other vessels (e.g., 1–2 additional focal stenosis, SYNTAX score ≤22)								

Table PG3.4 Left Main Coronary Artery Stenosis (Cont.)

Appropriate Use Score (1-9) Left Main Disease	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**
29. ■ LMCA disease ■ Bifurcation involvement ■ Intermediate or high disease burden in other vessels (e.g., 1–2 additional bifurcation stenosis, long stenosis, SYNTAX score >22)	R (3)	A (8)	R (3)	A (9)	R (3)	A (9)	R (3)	A (9)

The number in parentheses next to the rating reflects the median score for that indication.
A indicates appropriate; AA = antianginal; BB = beta blockers; CABG = coronary artery bypass graft; LMCA = left main coronary artery; M = may be appropriate; PCI = percutaneous coronary intervention; R = rarely appropriate; and SYNTAX = Synergy between PCI with Taxus and Cardiac Surgery trial.

Table PG4.1 Internal Mammary Artery to Left Anterior Descending Coronary Artery Patent and without Significant Stenosis

Appropriate Use Score (1-9)	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**
Stenosis Supplying 1 Territory Disease (Bypass Graft or Native Artery) to Territory Other Than Anterior								
30. ■ Low-risk findings on noninvasive testing	R (3)	R (1)	R (3)	R (2)	M (6)	R (3)	A (7)	M (4)
31. ■ Intermediate- or high-risk findings on noninvasive testing	M (5)	R (3)	M (5)	R (3)	A (7)	M (4)	A (8)	M (5)
32. ■ No stress test performed or, if performed, results are indeterminate ■ FFR ≤ 0.80*	M (4)	R (3)	M (4)	R (3)	M (6)	M (4)	A (8)	M (5)
Stenosis Supplying 2 Territories (Bypass Graft or Native Artery, Either 2 Separate Vessels or Sequential Graft Supplying 2 Territories) Not Including Anterior Territory								
33. ■ Low-risk findings on noninvasive testing	R (3)	R (2)	M (4)	R (3)	M (6)	R (3)	A (7)	M (5)
34. ■ Intermediate- or high-risk findings on noninvasive testing	M (5)	R (3)	M (5)	M (4)	A (7)	M (5)	A (8)	M (6)

The number in parentheses next to the rating reflects the median score for that indication. *iFR measurements with appropriate normal ranges may be substituted for FFR.
A indicates appropriate; AA = antianginal; BB = beta blockers; CABG = coronary artery bypass graft; FFR = fractional flow reserve; iFR = instant wave-free ratio; IMA = internal mammary artery; LAD = left anterior descending coronary artery; LCX = left circumflex artery; M = may be appropriate; PCI = percutaneous coronary intervention; and R = rarely appropriate.

Table PG4.2 Internal Mammary Artery to Left Anterior Descending Coronary Artery Not Patent

Appropriate Use Score (1-9)								
	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	PCI	CABG	PCI	CABG	PCI	CABG	PCI	CABG
Stenosis Supplying 1 Territory Disease (Bypass Graft or Native Artery)–Anterior (LAD) Territory								
35. ■ Low-risk findings on noninvasive testing	M (5)	R (3)	M (5)	R (3)	M (6)	M (4)	A (7)	M (5)
36. ■ Intermediate- or high-risk findings on noninvasive testing	M (6)	M (4)	M (6)	M (4)	A (7)	M (5)	A (8)	M (6)
37. ■ No stress test performed or, if performed, results are indeterminate ■ FFR ≤ 0.80*	M (5)	M (4)	M (6)	M (4)	A (7)	M (5)	A (8)	M (6)
Stenosis Supplying 2 Territories (Bypass Graft or Native Artery, Either 2 Separate Vessels or Sequential Graft Supplying 2 Territories) LAD Plus Other Territory								
38. ■ Low-risk findings on noninvasive testing	M (5)	M (4)	M (6)	M (4)	A (7)	M (5)	A (7)	M (6)
39. ■ Intermediate- or high-risk findings on noninvasive testing	M (6)	M (5)	A (7)	M (6)	A (7)	A (7)	A (8)	A (8)
Stenosis Supplying 3 Territories (Bypass Graft or Native Arteries, Separate Vessels, Sequential Grafts, or Combination Thereof) LAD Plus 2 Other Territories								
40. ■ Low-risk findings on noninvasive testing	M (5)	M (5)	M (6)	M (5)	M (6)	M (6)	A (7)	A (7)
41. ■ Intermediate- or high-risk findings on noninvasive testing	A (7)	A (7)	A (7)	A (7)	A (7)	A (7)	A (8)	A (8)

The number in parentheses next to the rating reflects the median score for that indication. *iFR measurements with appropriate normal ranges may be substituted for FFR.
A indicates appropriate; AA = antianginal; BB = beta blockers; CABG = coronary artery bypass graft; FFR = fractional flow reserve; iFR = instant wave-free ratio; IMA = internal mammary artery; LAD = left anterior descending coronary artery; LCX = left circumflex artery; M = may be appropriate; PCI = percutaneous coronary intervention; and R = rarely appropriate.

Table PG5.1 Stable Ischemic Heart Disease Undergoing Procedures for Which Coronary Revascularization May Be Considered

Appropriate Use Score (1-9)								
	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	PCI	CABG	PCI	CABG	PCI	CABG	PCI	CABG
Patients Undergoing Renal Transplantation, No Diabetes								
42. ■ One- or two-vessel CAD, no proximal LAD involvement, with low-risk noninvasive findings	R (3)	R (2)	M (4)	R (3)	M (6)	M (4)	A (7)	M (5)
43. ■ One- or two-vessel CAD, no proximal LAD involvement, with intermediate- or high-risk noninvasive findings	M (5)	M (4)	M (6)	M (5)	A (7)	M (5)	A (8)	M (6)
44. ■ One- or two-vessel CAD, including proximal LAD, with low-risk noninvasive findings	M (5)	M (4)	M (6)	M (5)	M (6)	M (6)	A (8)	A (7)
45. ■ One- or two-vessel CAD, including proximal LAD, with intermediate- or high-risk noninvasive findings	M (6)	M (6)	A (7)	A (7)	A (7)	A (7)	A (8)	A (8)
46. ■ Left main and/or three-vessel disease, with intermediate- or high-risk noninvasive findings (e.g., SYNTAX ≤22)	M (6)	A (7)	A (7)	A (7)	A (7)	A (7)	A (8)	A (8)
47. ■ Left main and/or three-vessel disease, with intermediate- or high-risk noninvasive findings (e.g., SYNTAX >22)	M (5)	A (7)	M (6)	A (8)	M (6)	A (8)	M (6)	A (9)

Table PG5.1 Stable Ischemic Heart Disease Undergoing Procedures for Which Coronary Revascularization May Be Considered (Cont.)

Appropriate Use Score (1-9)	Asymptomatic				Ischemic Symptoms			
	Not on AA Therapy or With AA Therapy		Not on AA Therapy		On 1 AA Drug (BB Preferred)		On ≥2 AA Drugs	
Indication	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**	**PCI**	**CABG**
Patients Undergoing Renal Transplantation, Diabetes Present								
48. ■ One- or two-vessel CAD, no proximal LAD involvement, with low-risk noninvasive findings	R (3)	R (3)	M (4)	R (3)	M (5)	M (4)	A (7)	M (6)
49. ■ One- or two-vessel CAD, no proximal LAD involvement, with intermediate- or high-risk noninvasive findings	M (5)	M (4)	M (5)	M (4)	M (6)	M (5)	A (7)	A (7)
50. ■ One- or two-vessel CAD, including proximal LAD, with low-risk noninvasive findings	M (5)	M (5)	M (5)	M (6)	M (5)	A (7)	A (7)	A (7)
51. ■ One- or two-vessel CAD, including proximal LAD, with intermediate- or high-risk noninvasive findings	M (6)	M (6)	M (6)	A (7)	M (6)	A (7)	A (7)	A (8)
52. ■ Left main and/or three-vessel disease, with intermediate- or high-risk noninvasive findings (e.g., SYNTAX ≤22)	M (6)	A (8)	M (6)	A (8)	M (6)	A (8)	A (7)	A (9)
53. ■ Left main and/or three-vessel disease, with intermediate- or high-risk noninvasive findings (e.g., SYNTAX >22)	M (5)	A (8)	M (5)	A (8)	M (5)	A (9)	M (5)	A (9)
Patient Who Will Undergo a Percutaneous Valve Procedure (TAVR, MitraClip, Others)								
54. ■ One- or two-vessel CAD, no proximal LAD involvement, with low-risk noninvasive findings	M (4)		M (4)		M (6)		A (8)	
55. ■ One- or two-vessel CAD, no proximal LAD involvement, with intermediate- or high-risk noninvasive findings	A (7)		A (7)		A (7)		A (8)	
56. ■ One- or two-vessel CAD, including proximal LAD, with low-risk noninvasive findings	M (6)		M (6)		A (7)		A (8)	
57. ■ One- or two-vessel CAD, including proximal LAD, with intermediate- or high-risk noninvasive findings	A (7)		A (7)		A (8)		A (9)	
58. ■ Left main and/or three-vessel disease, with intermediate- or high-risk noninvasive findings (e.g., SYNTAX ≤22)	A (8)		A (8)		A (8)		A (9)	
59. ■ Left main and/or three-vessel disease, with intermediate- or high-risk noninvasive findings (e.g., SYNTAX >22)	A (7)		A (7)		A (8)		A (9)	

The number in parentheses next to the rating reflects the median score for that indication. *iFR measurements with appropriate normal ranges may be substituted for FFR.
A indicates appropriate; AA = antianginal; BB, beta blockers; CABG = coronary artery bypass graft; CAD = coronary artery disease; LAD = left anterior descending coronary artery; M = may be appropriate; PCI = percutaneous coronary intervention; and R = rarely appropriate; SYNTAX = Synergy between PCI with Taxus and Cardiac Surgery trial; and TAVR, transcatheter aortic valve replacement.

Syntax Scores

The SYNTAX Score is based on the SYNTAX (Synergy between PCI with TAXUS drug-eluting stent and Cardiac Surgery) trial, which was designed to compare revascularization with either CABG or PCI using paclitaxel-eluting stents for three-vessel disease or left main disease (either isolated left main disease or left main disease with one-, two-, or three-vessel disease involving other arteries). Based on review of coronary angiographic studies, the SYNTAX score considers 11 measures of coronary lesion complexity, including location of lesion, coronary arterial system dominance, length of lesions,

presence of heavy calcification, thrombus, total occlusion or diffuse disease, number of diseased segments, vessel tortuosity, and location at a bifurcation, trifurcation or aorto-ostial locus. The SYNTAX trial results indicated that, for more severe CAD (SYNTAX scores greater than 22 for three-vessel or left main coronary disease), CABG offered a survival advantage over PCI, and it reduced the need for a repeat intervention and overall adverse cardiovascular events up to 4 years after revascularization.

Coding
See the Codes table for details.

Description

Percutaneous coronary interventions (PCI) is a non-surgical procedure used to treat narrowing (stenosis) of the coronary arteries of the heart found in coronary artery disease. After accessing the blood stream through the femoral or radial artery, the procedure uses coronary catheterization to visualize the blood vessels on X-ray imaging, which allows an interventional cardiologist to perform a coronary angioplasty, using a balloon catheter in which a deflated balloon is advanced into the obstructed artery and inflated to relieve the narrowing, performed with or without coronary stent implantation.

Related Policies

- Cardiac Applications of Positron Emission Tomography Scanning

Benefit Application

Benefit determinations should be based in all cases on the applicable contract language. To the extent there are any conflicts between these guidelines and the contract language, the contract language will control. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

Some state or federal mandates (e.g., Federal Employee Program [FEP]) prohibits plans from denying Food and Drug Administration (FDA)-approved technologies as investigational. In these instances, plans may have to consider the coverage eligibility of FDA-approved technologies on the basis of medical necessity alone.

Regulatory Status

Percutaneous coronary interventions (PCI) are surgical procedures, therefore are not regulated by the U.S. Food and Drug Administration (FDA).

Rationale

Background
The medical necessity criteria outlined in this document govern the appropriate use of non-emergent coronary revascularizations in general, but focus on non-emergent percutaneous coronary interventions (PCI) in particular.

Percutaneous coronary interventions (PCI) are non-surgical procedures performed using vascular access through skin which restores patency of diseased coronary arteries, performed with or without coronary stent implantation. For the sake of this policy, this includes coronary atherectomy for the treatment of coronary artery disease (CAD). Elective surgical revascularization procedures, (e.g.,

coronary artery bypass grafting [CABG] procedures), if reviewed, must meet these elective coronary revascularization criteria, and also meet appropriateness criteria for use of the surgical approach (see Policy Guidelines section).

This medical policy is not intended to address PCI for acute coronary syndrome (ACS).
Acute indications for PCI are defined as those performed in the setting of an acute coronary syndrome, including all myocardial infarctions (ST-segment elevation and non– ST-segment elevation), as well as unstable angina (see Policy Guidelines section).[7] Findings from studies comparing PCI with coronary bypass grafting (CABG) suggest that in most patients with acute CAD with multi-vessel disease or isolated proximal left anterior stenosis amenable to either treatment, CABG led to a significantly lower long-term incidence of ischemic events and the need for repeat interventions. CABG is recommended for patients with more severe disease involving large areas of the myocardium supplied by occluded vessels or significant left main coronary artery disease.

This medical policy is principally derived guidance from a 2017 report of the American College of Cardiology Appropriate Use Criteria Task Force (ACC), American Association for Thoracic Surgery (AATS), American Heart Association (AHA), American Society of Echocardiography (ASE), American Society of Nuclear Cardiology (ASNC), Society for Cardiovascular Angiography Interventions (SCAI), Society of Cardiovascular Computed Tomography (SCCT), Society of Thoracic Surgeons (STS), **Appropriate Use Criteria (AUC) for Coronary Revascularization in Patients with Stable Ischemic Heart Disease (SIHD),** as published in the Journal of the American College of Cardiology.[1]

Literature Review
Optimal antianginal medical therapy is defined as the use of at least 2 classes of therapies to reduce anginal symptoms. ACC/AHA guidelines suggest that beta-blockers should be considered as initial therapy for chronic stable angina. Current practice guidelines indicate low-risk patients with chronic stable angina should be treated initially with optimal medical therapy (OMT) and lifestyle modification.[26-31]

Current guidelines for the management of stable angina emphasize risk factor modification, namely smoking cessation, exercise, diabetes mellitus management, lipid lowering, antianginal, and antihypertensive therapies. Despite the best efforts of the clinician, all patients may not achieve target goals for risk factor modification. However, a plan of care to address risk factors is assumed to be occurring in patients represented in the indications.[31]

Hospitals and clinicians are encouraged to contribute PCI data to a national Cardiovascular Data Registry (The NCDR CathPCI Registry).

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Documentation for Clinical Review

Please provide the following documentation:

- History and physical and/or consultation notes including:
  - Angina description (Canadian Cardiovascular Society Grading of Angina Pectoris, Class I, II, III or IV)
  - Documentation of 1 or more severe (greater than or equal to 70% diameter) epicardial (non-left main) artery or intermediate (50 to 69% diameter) left main coronary artery stenosis detected by diagnostic coronary angiography, or with a Fractional Flow Reserve (FFR) using Coronary Computed Tomography Angiography (CCTA) of less than or equal to 0.80
- 2017 "Appropriate Use Criteria for Coronary Revascularization" (AUC) score documented by the requesting provider
  - If the AUC score is 7 – 9 ("appropriate use"), (the cardiologist must document the score and indication in the medical records)
  - If the AUC score is 4 – 6 ("may be appropriate") or 1 – 3 ("rarely appropriate"), the cardiologist must also include a brief narrative describing the clinical scenario(s) justifying the revascularization procedure. Clinical risk factors which may support the procedure include **one or more** of the following:
    - Unusual location of obstruction(s), unusual coronary anatomy, or unusual flow dynamics noted by the cardiologist
    - Intercurrent cardiac disease (e.g., congestive heart failure, myocardial disease, arrhythmia, valvular disease)
    - Current or recent smoking history (within one year)
    - Cardiologist documentation of difficult-to-control uncontrolled hypertension on maximal therapy or uncontrolled dyslipidemia on maximal therapy
    - Diabetes mellitus with a first or second degree relative with premature coronary artery disease (i.e., age less than 65, MI or coronary intervention)
    - Strong family history of coronary artery disease
    - Prior PCI or CABG procedure
- Pertinent past procedural and surgical history
- Radiology report(s) (i.e., MRI, FFRCT, CCTA)

Post Service (in addition to the above, please include the following):

- In addition to the required Prior Authorization documentation, please include:
  - Results/reports of tests done to support the need for PCI
  - Procedure report for PCI

Coding

This Policy relates only to the services or supplies described herein. Benefits may vary according to product design; therefore, contract language should be reviewed before applying the terms of the Policy.

The following codes are included below for informational purposes. Inclusion or exclusion of a code(s) does not constitute or imply member coverage or provider reimbursement policy. Policy Statements are intended to provide member coverage information and may include the use of some codes for clarity. The Policy Guidelines section may also provide additional information for how to interpret the Policy Statements and to provide coding guidance in some cases.

Type	Code	Description
CPT®	92920	Percutaneous transluminal coronary angioplasty; single major coronary artery or branch
	92921	Percutaneous transluminal coronary angioplasty; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)
	92924	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; single major coronary artery or branch
	92925	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)
	92928	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch
	92929	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)
	92933	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch
	92934	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)
	92937	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel
	92938	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; each additional branch subtended by the bypass graft (List separately in addition to code for primary procedure)
	92941	Percutaneous transluminal revascularization of acute total/subtotal occlusion during acute myocardial infarction, coronary artery or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty, including aspiration thrombectomy when performed, single vessel
	92943	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty; single vessel
	92944	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass

Type	Code	Description
		graft, any combination of intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (List separately in addition to code for primary procedure)
	92978	Endoluminal imaging of coronary vessel or graft using intravascular ultrasound (IVUS) or optical coherence tomography (OCT) during diagnostic evaluation and/or therapeutic intervention including imaging supervision, interpretation and report; initial vessel (List separately in addition to code for primary procedure)
	92979	Endoluminal imaging of coronary vessel or graft using intravascular ultrasound (IVUS) or optical coherence tomography (OCT) during diagnostic evaluation and/or therapeutic intervention including imaging supervision, interpretation and report; each additional vessel (List separately in addition to code for primary procedure)
HCPCS	C1874	Stent, coated/covered, with delivery system
	C9600	Percutaneous transcatheter placement of drug eluting intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch
	C9601	Percutaneous transcatheter placement of drug-eluting intracoronary stent(s), with coronary angioplasty when performed; each additional branch of a major coronary artery (list separately in addition to code for primary procedure)
	C9602	Percutaneous transluminal coronary atherectomy, with drug eluting intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch
	C9603	Percutaneous transluminal coronary atherectomy, with drug-eluting intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery (list separately in addition to code for primary procedure)
	C9604	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel
	C9605	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including distal protection when performed; each additional branch subtended by the bypass graft (list separately in addition to code for primary procedure)
	C9607	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty; single vessel
	C9608	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (list separately in addition to code for primary procedure)

Policy History

This section provides a chronological history of the activities, updates and changes that have occurred with this Medical Policy.

Effective Date	Action
04/17/2017	Custom Policy
12/01/2017	Policy revision without position change
02/01/2018	Policy revision without position change
02/01/2019	Title change from Elective Revascularization Utilizing Percutaneous Coronary Intervention for Non-Acute, Stable Coronary Artery Disease Policy revision without position change
10/01/2019	Administrative update
12/01/2019	Policy revision without position change
04/01/2020	Annual review. Policy statement, guidelines, and documentation for clinical review updated. Coding update.
04/01/2021	Annual review. No change to policy statement.
05/01/2022	Annual review. Policy guidelines updated.
11/01/2022	Policy statement and guidelines updated.
12/01/2022	Administrative update. Policy statement, guidelines and literature updated.
09/01/2023	Annual review. Policy statement and guidelines updated.
09/01/2024	Annual review. No change to policy statement

Definitions of Decision Determinations

Medically Necessary: Services that are Medically Necessary include only those which have been established as safe and effective, are furnished under generally accepted professional standards to treat illness, injury or medical condition, and which, as determined by Blue Shield, are: (a) consistent with Blue Shield medical policy; (b) consistent with the symptoms or diagnosis; (c) not furnished primarily for the convenience of the patient, the attending Physician or other provider; (d) furnished at the most appropriate level which can be provided safely and effectively to the patient; and (e) not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of the Member's illness, injury, or disease.

Investigational/Experimental: A treatment, procedure, or drug is investigational when it has not been recognized as safe and effective for use in treating the particular condition in accordance with generally accepted professional medical standards. This includes services where approval by the federal or state governmental is required prior to use, but has not yet been granted.

Split Evaluation: Blue Shield of California/Blue Shield of California Life & Health Insurance Company (Blue Shield) policy review can result in a split evaluation, where a treatment, procedure, or drug will be considered to be investigational for certain indications or conditions, but will be deemed safe and effective for other indications or conditions, and therefore potentially medically necessary in those instances.

Prior Authorization Requirements and Feedback (as applicable to your plan)

Within five days before the actual date of service, the provider must confirm with Blue Shield that the member's health plan coverage is still in effect. Blue Shield reserves the right to revoke an authorization prior to services being rendered based on cancellation of the member's eligibility. Final determination of benefits will be made after review of the claim for limitations or exclusions.

Questions regarding the applicability of this policy should be directed to the Prior Authorization Department at (800) 541-6652, or the Transplant Case Management Department at (800) 637-2066 ext. 3507708 or visit the provider portal at www.blueshieldca.com/provider.

We are interested in receiving feedback relative to developing, adopting, and reviewing criteria for medical policy. Any licensed practitioner who is contracted with Blue Shield of California or Blue Shield of California Promise Health Plan is welcome to provide comments, suggestions, or concerns. Our internal policy committees will receive and take your comments into consideration.

For utilization and medical policy feedback, please send comments to: MedPolicy@blueshieldca.com

Disclaimer: This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. Blue Shield of California may consider published peer-reviewed scientific literature, national guidelines, and local standards of practice in developing its medical policy. Federal and state law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over medical policy and must be considered first in determining covered services. Member contracts may differ in their benefits. Blue Shield reserves the right to review and update policies as appropriate.

Appendix A

POLICY STATEMENT (No changes)	
BEFORE	**AFTER**
Elective Percutaneous Coronary Intervention (PCI) BSC6.02 **Policy Statement:** The medical necessity criteria outlined in this document govern the appropriate use of non-emergent coronary revascularizations in general but focuses on non-emergent percutaneous coronary interventions (PCI) in particular. **This medical policy is not intended to address prior authorization of PCI for acute coronary syndrome (ACS) meeting the definitions as noted in the Policy Guidelines section below** for more details. However, services provided without prior authorization (including inpatient care) are subject to post service review and are also subject to the criteria and definitions in this policy. Documentation of why the individual is thought to have ACS or other acute indications are required to meet criteria. I. **Elective** (NOT emergent) coronary revascularization utilizing percutaneous coronary intervention for non-acute, stable coronary artery disease may be considered **medically necessary** when **both** of the following criteria are met: A. Documentation of clinical evaluation includes **all** of the following[2,3,4,5]: 1. The individual exhibits chronic symptoms of Class I, II, III or IV angina (Canadian Cardiovascular Society [CCS] Grading of Angina Pectoris, Class I, II, III or IV, [see Policy Guidelines section]), that persist despite optimal antianginal medical therapy (OAMT;) (see Policy Guidelines section), as tolerated, which includes at minimum use of three of four anti-anginal classes of agents (i.e., beta blockers, calcium channel blockers, sodium channel blockers, nitrates) 2. Symptomatic individuals with 1 or more severe (greater than or equal to 70% diameter) epicardial (non-left main) artery or intermediate (50 to 69% diameter) left main coronary artery stenosis detected by diagnostic coronary	**Elective Percutaneous Coronary Intervention (PCI) BSC6.02** **Policy Statement:** The medical necessity criteria outlined in this document govern the appropriate use of non-emergent coronary revascularizations in general but focuses on non-emergent percutaneous coronary interventions (PCI) in particular. **This medical policy is not intended to address prior authorization of PCI for acute coronary syndrome (ACS) meeting the definitions as noted in the Policy Guidelines section below** for more details. However, services provided without prior authorization (including inpatient care) are subject to post service review and are also subject to the criteria and definitions in this policy. Documentation of why the individual is thought to have ACS or other acute indications are required to meet criteria. I. **Elective** (NOT emergent) coronary revascularization utilizing percutaneous coronary intervention for non-acute, stable coronary artery disease may be considered **medically necessary** when **both** of the following criteria are met: A. Documentation of clinical evaluation includes **all** of the following[2,3,4,5]: 1. The individual exhibits chronic symptoms of Class I, II, III or IV angina (Canadian Cardiovascular Society [CCS] Grading of Angina Pectoris, Class I, II, III or IV, [see Policy Guidelines section]), that persist despite optimal antianginal medical therapy (OAMT;) (see Policy Guidelines section), as tolerated, which includes at minimum use of three of four anti-anginal classes of agents (i.e., beta blockers, calcium channel blockers, sodium channel blockers, nitrates) 2. Symptomatic individuals with 1 or more severe (greater than or equal to 70% diameter) epicardial (non-left main) artery or intermediate (50 to 69% diameter) left main coronary artery stenosis detected by diagnostic coronary

POLICY STATEMENT (No changes)	
BEFORE	**AFTER**
angiography (see Policy Guidelines section), or with a Fractional Flow Reserve (FFR) using Coronary Computed Tomography Angiography (CCTA) of less than or equal to 0.80 B. Utilizing the ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS 2017 Appropriate Use Criteria (AUC) for Coronary Revascularization in individual with Stable Ischemic Heart Disease (SIHD), a rated level of appropriateness and the specific clinical scenario (e.g., one-vessel disease, two-vessel disease, three-vessel disease, left main disease, SIHD with prior CABG) must be documented in the medical record: 1. The "appropriate use" score is rated level 7 – 9 2. The "appropriate use" score is rated level is 4 – 6 ("may be appropriate") or 1 – 3 ("rarely appropriate") and includes a brief narrative in the medical record describing the clinical scenario(s) justifying the revascularization procedure. Clinical risk factors which may support the procedure include prior PCI or CABG procedure. II. Elective coronary revascularization for non-acute, stable coronary artery disease is considered **not medically necessary** for all other indications, including if the individual is unwilling to comply with recommended medical therapy, or if the individual is unlikely to benefit from the proposed procedure (e.g., limited life expectancy from concomitant disease).	angiography (see Policy Guidelines section), or with a Fractional Flow Reserve (FFR) using Coronary Computed Tomography Angiography (CCTA) of less than or equal to 0.80 B. Utilizing the ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS 2017 Appropriate Use Criteria (AUC) for Coronary Revascularization in individual with Stable Ischemic Heart Disease (SIHD), a rated level of appropriateness and the specific clinical scenario (e.g., one-vessel disease, two-vessel disease, three-vessel disease, left main disease, SIHD with prior CABG) must be documented in the medical record: 1. The "appropriate use" score is rated level 7 – 9 2. The "appropriate use" score is rated level is 4 – 6 ("may be appropriate") or 1 – 3 ("rarely appropriate") and includes a brief narrative in the medical record describing the clinical scenario(s) justifying the revascularization procedure. Clinical risk factors which may support the procedure include prior PCI or CABG procedure. II. Elective coronary revascularization for non-acute, stable coronary artery disease is considered **not medically necessary** for all other indications, including if the individual is unwilling to comply with recommended medical therapy, or if the individual is unlikely to benefit from the proposed procedure (e.g., limited life expectancy from concomitant disease).