

Cardio Policy:

Percutaneous Coronary Interventions

POLICY NUMBER UM CARDIO_1094	SUBJECT Percutaneous Coronary Interventions		DEPT/PROGRAM UM Dept	PAGE 1 OF 6
DATES COMMITTEE REVIEWED 04/06/11, 11/07/12, 08/22/13, 06/31/14, 05/15/15, 08/12/15, 05/24/16, 11/23/16, 12/21/16, 10/31/17, 02/20/19, 07/30/19, 12/11/19, 08/12/20, 06/09/21, 08/11/21, 09/08/21, 10/12/22, 02/01/23, 05/10/23, 12/20/23	APPROVAL DATE December 20, 2023	EFFECTIVE DATE December 22, 2023	COMMITTEE APPROVAL DATES 04/06/11, 11/07/12, 08/22/13, 06/31/14, 05/15/15, 08/12/15, 05/24/16, 11/23/16, 12/21/16, 10/31/17, 02/20/19, 07/30/19, 12/11/19, 08/12/20, 06/09/21, 08/11/21, 09/08/21, 10/12/22, 02/01/23, 05/10/23, 12/20/23	
PRIMARY BUSINESS OWNER: UM		COMMITTEE/BOARD APPROVAL Utilization Management Committee		
URAC STANDARDS HUM v8: UM 1-2; UM 2-1	NCQA STANDARDS UM 2		ADDITIONAL AREAS OF IMPACT	
CMS REQUIREMENTS	STATE/FEDERAL REQUIREMENTS		APPLICABLE LINES OF BUSINESS Commercial, Exchange, Medicaid	

I. PURPOSE

Indications for determining medical necessity for the procedure of Percutaneous Coronary Intervention (PCI).

II. DEFINITIONS

Percutaneous Transluminal Coronary Angioplasty (PTCA) is a procedure used to open clogged heart arteries. Angioplasty involves temporarily inserting and blowing up a tiny balloon where the artery is clogged to help widen the artery.

Percutaneous Coronary Intervention (PCI) with Stent: Angioplasty is often combined with the permanent placement of a stent, a small wire mesh tube, to help prop the artery open and decrease the chance of it narrowing again. Some stents are coated with medication to help keep the artery open (drug-eluting stents), while others are not (bare-metal stents).

A decision for PCI is made based on the findings on diagnostic cardiac catheterization. The target vessel except left main, must have hemodynamically and angiographically significant lesion (greater than or equal to 70%) in one or more than one vessel. Intermediate coronary lesions are defined as lesions with 50-60% stenosis on cardiac angiography. This may require further workup with Fractional Flow Reserve (FFR) or IVUS depending on patient's symptomatology and nuclear stress test findings. Hemodynamically significant left main stenosis is angiographically defined as having greater than or equal to 50% stenosis.

A single vessel CAD may have single or multiple lesions/stenosis in native coronary artery or single bypass graft. A 2 vessel CAD may have single or multiple lesions/stenosis in 2 different native coronary vessels or in combination with bypass graft(s). Similarly, 3 vessel CAD may have single or

multiple lesions/stenosis in 3 different native coronary vessels/arteries or a combination of native coronary arteries with bypass graft(s).

A. High-Risk findings on Stress Test (greater than 3% annual mortality rate) includes:

1. Severe resting or exercise left ventricular dysfunction (LVED less than 35%)
2. High-risk treadmill score (score less than or equal to 11)
3. Stress induced large perfusion defect (particularly if anterior)
4. Stress induced multiple perfusion defects of moderate size
5. Large, fixed perfusion defect with LV dilation or increased lung uptake (thallium-201)
6. Stress induced moderate perfusion defect with LV dilation or increased lung uptake (thallium-201)
7. Echocardiographic wall motion abnormality (involving 2 segments) developing at low dose of Dobutamine (less than or equal to 10 mg/kg/min) or at a low heart rate (less than 120 beats/min).
8. Stress echocardiographic evidence of extensive ischemia

B. Intermediate-Risk findings on Stress Test (1% to 3% annual mortality rate)

1. Mild/moderate resting left ventricular dysfunction (LVEF 35% to 49%)
2. Intermediate-risk treadmill score (score between -11 and -5)
3. Stress induced moderate perfusion defect without LV dilation or increased lung intake (thallium-201)
4. Limited stress echocardiographic ischemia with a wall motion abnormality only at higher doses of Dobutamine involving less than or equal to 2 segments

C. Low-Risk findings on Stress Test (less than 1% annual mortality rate)

5. Low-risk treadmill score (Duke score 5)
6. Normal or small myocardial perfusion defect at rest or with stress
7. Normal stress echocardiographic wall motion or no change of limited resting wall motion abnormalities during stress.

Grading of Angina Pectoris by the Canadian Cardiovascular Society Classification System:

Class I: Ordinary physical activity does not cause angina, such as walking, climbing stairs. Angina occurs with strenuous, rapid, or prolonged exertion at work or recreation.

Class II: Slight limitation of ordinary activity. Angina occurs on walking more than 2 blocks on the level and climbing more than 1 flight of ordinary stairs at a normal pace and in normal condition.

Class III: Marked limitations of ordinary physical activity. Angina occurs on walking 1 or 2 blocks on the level and climbing 1 flight of stairs in normal conditions and at a normal pace.

Class IV: Inability to carry on any physical activity without discomfort. Angina symptoms may be present at rest.

An appropriate diagnostic or therapeutic procedure is one in which the expected clinical benefit exceeds the risks or negative consequences of the procedure by a sufficiently wide margin such that the procedure is generally considered acceptable or reasonable care. The ultimate objective of AUC is to improve patient care and health outcomes in a cost-effective manner but is not intended to ignore ambiguity and nuance intrinsic to clinical decision making.

Appropriate Care – Median Score 7-9

May be Appropriate Care – Median Score 4-6

Rarely Appropriate Care – Median Score 1-3

- A. Guideline directed medical therapy (GDMT) are outlined by joint American College of Cardiology (ACC)/American Heart Association (AHA) in cardiovascular clinical practice guidelines as Class I recommendation. These are maximally tolerated medications for a cardiovascular condition, when prescribed, have shown to improve healthcare outcomes such as survival along with significant reduction in major adverse cardiovascular events and hospitalization. For all recommended drug treatment regimens, the prescriber should confirm the dosage with product insert material and carefully evaluate for contraindications and interactions^{1,2,3,4,6,7,8,9,10,11,12}

III. POLICY

Indications for determining medical necessity are:

A. Patients without prior bypass grafts and on maximally tolerated GDMT

1. Patients should have objective evidence of myocardial ischemia due to lesions amenable to transluminal intervention and/or has not responded to GDMT. **(AUC Score 8)**^{1,2,3,4,5}
2. Patients with Angina Class III or IV and/or evidence of intermediate to high-risk findings on noninvasive testing with 2 vessels CAD with LAD stenosis. **(AUC Score 7)**^{1,2,3,4,5}
3. Patients with Angina Class III or IV and/or evidence of intermediate to high-risk findings on noninvasive testing with 3 vessels CAD with focal stenosis and low SYNTAX score. **(AUC Score 7)**^{1,2,3,4,5}
4. Patients with Angina Class III or IV and/or evidence of intermediate to high-risk findings on noninvasive testing and with isolated left main stenosis. **(AUC Score 6)**^{1,2,3,4,5}
5. Patients with Angina Class III or IV with one or 2 vessel CAD without involvement of proximal LAD and with evidence of high-risk findings on noninvasive testing. **(AUC Score 9)**^{1,2,3,4,5}
6. Patients with Angina Class III or IV with one or 2 vessel CAD without involvement of proximal LAD and with no prior non-invasive testing. **(AUC Score 7)**^{1,2,3,4,5}
7. Patients with Angina Class III or IV with one or 2 vessel CAD with borderline stenosis of 50-60% but with FFR less than or equal to 0.80 and/or IVUS with significant reduction of cross sectional area of coronary lumen. **(AUC Score 7)**^{1,2,3,4,5}
8. Patients with Angina Class III or IV with Chronic Total Occlusion (CTO) of 1 major coronary artery, and with evidence of intermediate **(AUC Score 7)**^{1,2,3,4,5} or high-risk **(AUC Score 8)**^{1,2,3} findings on noninvasive testing.
9. Patients with Angina Class III or IV with one vessel CAD involving proximal LAD, and with evidence of low **(AUC Score 8)**^{1,2,3,4,5} or intermediate **(AUC Score 9)**^{1,2,3,4,5} or high **(AUC Score 9)**^{1,2,3,4,5} risk findings on noninvasive testing.
10. Patients with Angina Class I or II with one vessel CAD involving proximal LAD, and with evidence of low **(AUC Score 7)**^{1,2,3,4,5} or intermediate **(AUC Score 8)**^{1,2,3,4,5} or high **(AUC Score 9)**^{1,2,3,4,5} risk findings on noninvasive testing.
11. Asymptomatic Patients with one or 2 vessel CAD without involvement of proximal LAD and with evidence of high-risk findings on noninvasive testing. **(AUC Score 7)**^{1,2,3,4,5}
12. Patients with Angina Class I or II with one or 2 vessel CAD without involvement of proximal LAD and with evidence of high-risk findings on noninvasive testing. **(AUC Score 8)**^{1,2,3,4,5}
13. Asymptomatic patients with 3 vessel CAD with no left main involvement, and with evidence of intermediate **(AUC Score 7)**^{1,2,3,4,5} or high **(AUC Score 8)**^{1,2,3,4,5} risk findings on noninvasive testing.

14. Patients with Angina Class I or II with 3 vessel CAD with no left main involvement, and with evidence of intermediate **(AUC Score 8)**^{1,2,3,4,5} or high-risk findings **(AUC Score 9)**^{1,2,3,4,5} on noninvasive testing.
15. Patients with Angina Class III or IV with 3 vessel CAD with no left main involvement, and with evidence of intermediate **(AUC Score 9)**^{1,2,3,4,5} or high-risk findings **(AUC Score 9)**^{1,2,3,4,5} on noninvasive testing.
16. Asymptomatic patients with 3 vessel CAD with no left main involvement and with abnormal LV systolic function. **(AUC Score 8)**^{1,2,3,4,5}
17. Patients with Angina Class I or II with 3 vessel CAD with no left main involvement and with abnormal LV systolic function. **(AUC Score 9)**^{1,2,3,4,5}
18. Patients with Angina Class III or IV with 3 vessel CAD with no left main involvement and with abnormal LV systolic function. **(AUC Score 9)**^{1,2,3,4,5}
19. Asymptomatic or symptomatic patients with left main stenosis. **(AUC Score 9)**^{1,2,3,4,5}
20. Symptomatic patient with Angina Class II-IV with intermediate or high-risk findings on noninvasive testing and hemodynamically/angiographically significant stenosis in one or more native coronary artery. **(AUC Score 8)**^{1,2,3,4,5}
21. Asymptomatic patient with intermediate or high-risk findings on noninvasive testing, and hemodynamically/angiographically significant stenosis in one or more native coronary artery. **(AUC Score 7)**^{1,2,3,4,5}

B. Patients with prior bypass grafts and on maximally tolerated GDMT

1. Asymptomatic patients with one or more stenosis in bypass graft and with high-risk **(AUC Score 7)**^{1,2,3,4,5} findings on noninvasive testing.
2. Patients with Angina Class I or II with one or more stenosis in bypass graft and with low **(AUC Score 6)**^{1,2,3,4,5}, intermediate **(AUC Score 7)**^{1,2,3,4,5} or high-risk **(AUC Score 8)**^{1,2,3,4,5} findings on noninvasive testing.
3. Patients with Angina Class I or II with patent bypass grafts but with one or more stenosis in native coronary arteries without bypass graft and have intermediate **(AUC Score 6)**^{1,2,3} or high-risk **(AUC Score 8)**^{1,2,3,4,5} findings on noninvasive testing.
4. Patients with Angina Class III or IV with one or more stenosis in bypass graft and with low **(AUC Score 7)**^{1,2,3,4,5}, intermediate **(AUC Score 8)**^{1,2,3,4,5} or high-risk **(AUC Score 8)**^{1,2,3,4,5} findings on noninvasive testing.
5. Patients with Angina Class III or IV with patent bypass grafts, but with one or more stenosis in native coronary arteries without bypass graft and have low **(AUC Score 7)**^{1,2,3,4,5}, intermediate **(AUC Score 8)**^{1,2,3,4,5} or high-risk **(AUC Score 9)**^{1,2,3,4,5} findings on noninvasive testing.
6. Symptomatic patient with Angina Class II-IV with intermediate or high-risk findings on noninvasive testing and having hemodynamically/angiographically significant stenosis of one or more native coronary artery and/or bypass graft(s). **(AUC Score 8)**^{1,2,3,4,5}
7. Asymptomatic patient with one or more failed bypass graft(s) not amenable for intervention, having intermediate or high-risk findings on noninvasive testing and hemodynamically/angiographically significant stenosis in one or more native coronary artery that is amenable for percutaneous intervention. **(AUC Score 7)**^{1,2,3,4,5}

C. Limitations

- A. Avoid intervention in hemodynamically stable patients with:
 1. Significant (greater than or equal to 60%) stenosis of an unprotected left main coronary artery upstream from an acute occlusion in the left coronary system that might be disrupted by the angioplasty catheter.

2. Extremely long or angulated infarct-related lesions with Thrombolysis in Myocardial Infarction (TIMI) grade 3 flow.
 3. Infarct-related lesions with TIMI grade 3 flow in stable patients with 3 vessel disease.
 4. Infarct-related lesions of small or secondary vessels.
- B. Before PCI can be performed in a patient with CAD the following must be considered: Predicted or observed lack of adequate response to maximally tolerated GDMT^{1,2,3,4,6,7,8,9,10,11,12}
- C. Requests for services that are part of a surveillance protocol for patients who are involved in a clinical trial are considered out of scope (OOS) for New Century Health and cannot be reviewed.

IV. PROCEDURE

- A. To review a request for medical necessity, the following documents must be submitted for review
1. Cardiologist note that prompted request
 2. Cardiac catheterization that supports PCI request
- B. Primary codes appropriate for this service:
- PCI with Stent – 92928 (Single Artery), 92929 (Each Additional Branch),
 PTCA – 92920 (Single Artery), 92921 (Each Additional Branch)
 PCI of CTO – 92943 (Single Artery), 92944 (Each Additional Branch)
 PCI with Atherectomy with Stent – 92933 (Single Artery), 92934 (Each Additional Branch),
 PCI of Bypass Graft with Stent/PTA/Atherectomy – 92937 (Single Artery), 92938 (Each Additional Branch)
 Atherectomy when performed with angioplasty -- 92924 (Single Artery) 92925 (Each Additional Branch)

V. APPROVAL AUTHORITY

- A. Review – Utilization Management Department
- B. Final Approval – Utilization Management Committee

VI. ATTACHMENTS

- A. None

VII. REFERENCES

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