

eMeasure Title	Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet		
eMeasure Identifier (Measure Authoring Tool)	164	eMeasure Version number	5.2.000
NQF Number	0068	GUID	0713ea8f-0e5b-4099-8c7c-dd677280398f
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	National Committee for Quality Assurance		
Measure Developer	National Committee for Quality Assurance		
Endorsed By	National Quality Forum		
Description	Percentage of patients 18 years of age and older who were diagnosed with acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) in the 12 months prior to the measurement period, or who had an active diagnosis of ischemic vascular disease (IVD) during the measurement period, and who had documentation of use of aspirin or another antiplatelet during the measurement period.		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	None		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	<p>Cardiovascular disease, including stroke, is the leading cause of death in the United States. More than 85 million American adults have one or more types of cardiovascular disease. Specifically, more than 15 million adults (20 years and older) have coronary heart disease (CHD), over 8 million adults have angina, more than 7 million adults have had a myocardial infarction (MI), over 6 million adults have had a stroke, and nearly 7 million adults 40 years of age and older have peripheral artery disease (Mozaffarian et al., 2015). It is estimated that by 2030 more than 43 percent of Americans will have a form of cardiovascular disease (Heidenreich et al., 2011).</p> <p>In 2011, the total cost of cardiovascular disease and stroke in the United States was estimated to be \$320 billion. This total includes direct costs such as the cost of physicians and other health professionals, hospital services, prescribed medications and home health care, as well as indirect costs due to loss of productivity from premature mortality (Mozaffarian et al., 2015). By 2030, direct medical costs for cardiovascular disease are projected to increase to nearly \$918 billion (Heidenreich, 2011).</p> <p>Antiplatelet medications, such as aspirin and clopidogrel, are drugs that inhibit platelets from clumping together and forming clots. Their use in the secondary prevention of cardiovascular events is well established. In patients who are at high risk because they already have occlusive cardiovascular disease, long-term antiplatelet therapy reduces the yearly risk of serious vascular events (MI, stroke, death) by about twenty-five percent (Antiplatelet Trialists' Collaboration, 1994; 2002; 2009). A more recent systematic review of the literature confirmed the benefits of</p>		

	antiplatelet therapy in reducing death from cardiovascular causes, MI, or stroke (Cheng, 2013). Antiplatelet agents also have a beneficial effect in reducing all-cause mortality and fatal cardiovascular events in patients with peripheral arterial disease (Wong et al., 2011).
Clinical Recommendation Statement	<p>AHA/ACCF SECONDARY PREVENTION AND RISK REDUCTION THERAPY FOR PATIENTS WITH CORONARY AND OTHER ATHEROSCLEROTIC VASCULAR DISEASE: 2011 UPDATE:</p> <ul style="list-style-type: none"> - Aspirin 75-162 mg daily is recommended in all patients with coronary artery disease unless contraindicated. (Level of Evidence: A) Clopidogrel 75 mg daily is recommended as an alternative for patients who are intolerant of or allergic to aspirin. (Level of Evidence: B) Class I - A P2Y12 receptor antagonist in combination with aspirin is indicated in patients after ACS or PCI with stent placement. (Level of Evidence: A) For patients receiving a bare-metal stent or drug-eluting stent during PCI for ACS, clopidogrel 75 mg daily, prasugrel 10 mg daily, or ticagrelor 90 mg twice daily should be given for at least 12 months. (Level of Evidence: A) Class I - For patients undergoing coronary artery bypass grafting, aspirin should be started within 6 hours after surgery to reduce saphenous vein graft closure. Dosing regimens ranging from 100 to 325 mg daily for 1 year appear to be efficacious. (Level of Evidence: A) Class I - In patients with extracranial carotid or vertebral atherosclerosis who have had ischemic stroke or TIA, treatment with aspirin alone (75-325 mg daily), clopidogrel alone (75 mg daily), or the combination of aspirin plus extended-release dipyridamole (25 mg and 200 mg twice daily, respectively) should be started and continued. (Level of Evidence: B) Class I - For patients with symptomatic atherosclerotic peripheral artery disease of the lower extremity, antiplatelet therapy with aspirin (75-325 mg daily) or clopidogrel (75 mg daily) should be started and continued. (Level of Evidence: A) Class I - Antiplatelet therapy is recommended in preference to anticoagulant therapy with warfarin or other vitamin K antagonists to treat patients with atherosclerosis. (Level of Evidence: A) Class I <p>GUIDELINES FOR THE PREVENTION OF STROKE IN PATIENTS WITH STROKE AND TRANSIENT ISCHEMIC ATTACK: 2014:</p> <ul style="list-style-type: none"> - For patients with noncardioembolic ischemic stroke or TIA, the use of antiplatelet agents rather than oral anticoagulation is recommended to reduce the risk of recurrent stroke and other cardiovascular events (Class I; Level of Evidence A). - Aspirin (50-325 mg/d) monotherapy (Class I; Level of Evidence A) or the combination of aspirin 25 mg and extended-release dipyridamole 200 mg twice daily (Class I; Level of Evidence B) is indicated as initial therapy after TIA or ischemic stroke for prevention of future stroke. (Revised recommendation) - Clopidogrel (75 mg) monotherapy is a reasonable option for secondary prevention of stroke in place of aspirin or combination aspirin/dipyridamole (Class IIa; Level of Evidence B). This recommendation also applies to patients who are allergic to aspirin. - For patients with noncardioembolic ischemic stroke or TIA, the use of antiplatelet agents rather than oral anticoagulation is recommended to reduce the risk of recurrent stroke and other cardiovascular events (Class I; Level of Evidence A).
Improvement Notation	Higher score indicates better quality
Reference	Antiplatelet Trialists' Collaboration. Collaborative overview of randomised trials of antiplatelet therapy. I. Prevention of death, myocardial infarction, and stroke by prolonged antiplatelet therapy in various categories of patients. <i>BMJ</i> . 1994;308:81-106.
Reference	Antithrombotic Trialists' Collaboration Collaborative meta-analysis of randomised trials of antiplatelet therapy for prevention of death, myocardial infarction, and stroke in high risk patients. <i>BMJ</i> . 2002;324:71-86.
Reference	Antithrombotic Trialists' (ATT) Collaboration; Baigent C, Blackwell L, Collins R, Emberson J, Godwin J, Peto R, Buring J, Hennekens C, Kearney P, Meade T, Patrono C, Roncaglioni MC, Zanchetti A. Aspirin in the primary and secondary prevention of vascular disease: collaborative meta analysis of individual participant data from randomized trials. <i>Lancet</i> . 2009;373:1849-1860.
Reference	Cheng JW. Updates in antiplatelet agents used in cardiovascular diseases. <i>J Cardiovas Pharmacol Ther</i> . 2013;18(6):514-524.
Reference	Heidenreich, P.A., J.G. Trogon, O.A. Khavjou, et al. 2011. "Forecasting the future of cardiovascular disease in the United States: a policy statement from the American Heart Association." <i>Circulation</i> .123:933-944.
Reference	Mozaffarian, D., E.J. Benjamin, A.S. Go, et al. 2015. "Heart disease and stroke statistics 2015 update: a report from the American Heart Association." <i>Circulation</i> . 131:e29-e322. doi: 10.1161/CIR.000000000000152
Reference	Wong PF, Chong LY, Mikhailidis DP, Robless P, Stansby G. Antiplatelet agents for intermittent claudication. <i>Cochrane Database of Systematic Reviews</i> 2011, Issue 11. Art. No.: CD001272. DOI: 10.1002/14651858.CD001272.pub2.
Reference	Smith SC Jr, Benjamin EJ, Bonow RO, Braun LT, Creager MA, Franklin BA, Gibbons RJ, Grundy SM, Hiratzka LF, Jones DW, Lloyd-Jones DM, Minissian M, Mosca L, Peterson ED, Sacco RL, Spertus J, Stein JH, Taubert KA. AHA/ACCF

	secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 2011 update: a guideline from the American Heart Association and American College of Cardiology Foundation. Circulation. 2011;124: 00-00.
Reference	Kernan WN, Ovbiagele B, Black HR, Bravata DM, Chimowitz MI, Ezekowitz MD, Fang MC, Fisher M, Furie KL, Heck DV, Johnston SC, Kasner SE, Kittner SJ, Mitchell PH, Rich MW, Richardson D, Schwamm LH, Wilson JA; on behalf of the American Heart Association Stroke Council, Council on Cardiovascular and Stroke Nursing, Council on Clinical Cardiology, and Council on Peripheral Vascular Disease. Guidelines for the prevention of stroke in patients with stroke and transient ischemic attack: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. Stroke. 2014;45:2160-2236.
Definition	None
Guidance	None
Transmission Format	TBD
Initial Population	Patients 18 years of age and older with a visit during the measurement period who had an AMI, CABG, or PCI during the 12 months prior to the measurement year or who had a diagnosis of IVD overlapping the measurement year
Denominator	Equals Initial Population
Denominator Exclusions	Patients who had documentation of use of anticoagulant medications overlapping the measurement year
Numerator	Patients who had an active medication of aspirin or another antiplatelet during the measurement year
Numerator Exclusions	Not Applicable
Denominator Exceptions	None
Supplemental Data Elements	For every patient evaluated by this measure also identify payer, race, ethnicity and sex

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Population Criteria

- **Initial Population =**
 - AND: Age >= 18 year(s) at: "Measurement Period"
 - AND: Union of:
 - "Diagnosis: Acute Myocardial Infarction" <= 12 month(s) starts before start of "Measurement Period"
 - "Diagnosis: Ischemic Vascular Disease" overlaps "Measurement Period"
 - Union of:
 - "Procedure, Performed: Percutaneous Coronary Interventions"
 - "Procedure, Performed: Coronary Artery Bypass Graft"
 - <= 12 month(s) ends before start of "Measurement Period"
 - AND: Union of:
 - "Encounter, Performed: Office Visit"
 - "Encounter, Performed: Face-to-Face Interaction"
 - "Encounter, Performed: Preventive Care Services - Established Office Visit, 18 and Up"
 - "Encounter, Performed: Preventive Care Services-Initial Office Visit, 18 and Up"
 - "Encounter, Performed: Home Healthcare Services"
 - "Encounter, Performed: Annual Wellness Visit"
 - during "Measurement Period"
- **Denominator =**
 - AND: Initial Population
- **Denominator Exclusions =**
 - OR: "Medication, Active: Anticoagulant Medications" overlaps "Measurement Period"
- **Numerator =**
 - AND: "Medication, Active: Aspirin and Other Antiplatelets" overlaps "Measurement Period"
- **Numerator Exclusions =**
 - None
- **Denominator Exceptions =**
 - None
- **Stratification =**
 - None

Data Criteria (QDM Variables)

- None

Data Criteria (QDM Data Elements)

- "Diagnosis: Acute Myocardial Infarction" using "Acute Myocardial Infarction Grouping Value Set (2.16.840.1.113883.3.464.1003.104.12.1001)"
- "Diagnosis: Ischemic Vascular Disease" using "Ischemic Vascular Disease Grouping Value Set (2.16.840.1.113883.3.464.1003.104.12.1003)"
- "Encounter, Performed: Annual Wellness Visit" using "Annual Wellness Visit Grouping Value Set (2.16.840.1.113883.3.526.3.1240)"
- "Encounter, Performed: Face-to-Face Interaction" using "Face-to-Face Interaction Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1048)"
- "Encounter, Performed: Home Healthcare Services" using "Home Healthcare Services Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1016)"
- "Encounter, Performed: Office Visit" using "Office Visit Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1001)"
- "Encounter, Performed: Preventive Care Services - Established Office Visit, 18 and Up" using "Preventive Care Services - Established Office Visit, 18 and Up Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1025)"
- "Encounter, Performed: Preventive Care Services-Initial Office Visit, 18 and Up" using "Preventive Care Services-Initial Office Visit, 18 and Up Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1023)"
- "Medication, Active: Anticoagulant Medications" using "Anticoagulant Medications Grouping Value Set (2.16.840.1.113883.3.464.1003.196.12.1283)"
- "Medication, Active: Aspirin and Other Antiplatelets" using "Aspirin and Other Antiplatelets Grouping Value Set (2.16.840.1.113883.3.464.1003.196.12.1211)"
- "Procedure, Performed: Coronary Artery Bypass Graft" using "Coronary Artery Bypass Graft Grouping Value Set (2.16.840.1.113883.3.464.1003.104.12.1002)"
- "Procedure, Performed: Percutaneous Coronary Interventions" using "Percutaneous Coronary Interventions Grouping Value Set (2.16.840.1.113883.3.464.1003.104.12.1010)"

Supplemental Data Elements

- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity CDCREC Value Set (2.16.840.1.114222.4.11.837)"
- "Patient Characteristic Payer: Payer" using "Payer SOP Value Set (2.16.840.1.114222.4.11.3591)"
- "Patient Characteristic Race: Race" using "Race CDCREC Value Set (2.16.840.1.114222.4.11.836)"
- "Patient Characteristic Sex: ONC Administrative Sex" using "ONC Administrative Sex AdministrativeGender Value Set (2.16.840.1.113762.1.4.1)"

Risk Adjustment Variables

- None

Measure Set	None
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