Proposed New Measure for HEDIS 2010: Aspirin Use and Discussion

NCQA seeks comments on a proposed new measure: *Aspirin Use and Discussion*. We propose to include four questions on the CAHPS survey to report two rates.

1. *Current Aspirin Use.* The percentage of members who are currently taking aspirin. A single rate is reported for the denominator, which includes the following groups.
    - Women 65–79 years of age with at least two risk factors for cardiovascular disease
    - Men 40–64 years of age with at least one risk factor for cardiovascular disease
    - Men 65–79 years of age
2. *Discussing Aspirin Risks and Benefits.* The percentage of members who discussed the risks and benefits of using aspirin with a doctor or other health provider. A single rate is reported for the denominator which includes the following groups.
    - Women 50–79 years of age
    - Men 40–79 years of age

The Measurement Advisory Panel (MAP) suggested several options for measuring the use of aspirin in health plans and the Committee on Performance Measurement (CPM) encouraged us to pursue the development of a survey measure for primary prevention of cardiovascular disease. In Fall 2008, NCQA conducted a cognitive test of survey language for the *Aspirin Use and Discussion* measure. Four items were tested pertaining to aspirin use, exclusions for use, aspirin discussion and cardiovascular risks. Responses to each item are used to calculate the two measure rates, as described in the attached Measure Specifications. All proposed items tested well and are recommended for inclusion in the new *Aspirin Use and Discussion* measure.

This measure is proposed for inclusion only in commercial and Medicaid CAHPS for HEDIS 2010. It will require additional cognitive testing and pilot data in the elderly population for inclusion in Medicare CAHPS.

Supporting documents for the proposed measure include the draft measure specifications and the supporting rationale.

NCQA thanks and acknowledges the contributions of the Aspirin Use MAP.

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Aspirin Use and Discussion

SUMMARY OF CHANGES TO HEDIS 2010

- First-year measure.

Description

The following components of this measure assess different facets of managing aspirin use.

1. Aspirin Use

The percentage of members who are currently taking aspirin. A single rate is reported for the denominator, which includes the following groups.

- Women 65–79 years of age with at least two risk factors for cardiovascular disease
- Men 40–64 years of age with at least one risk factor for cardiovascular disease
- Men 65–79 years of age

2. Discussing Aspirin Risk and Benefits

The percentage of members who discussed the risks and benefits of using aspirin with a doctor or other health provider. A single rate is reported for the denominator, which includes the following groups.

- Women 50–79 years of age
- Men 40–79 years of age

Definitions

Cardiovascular disease risk factor

The list of *cardiovascular disease risk factors* includes the following criteria.

- Current smoker or tobacco user, as identified by a response of “Every day” or “Some days” to the question, “Do you now smoke cigarettes (or use tobacco) every day, some days, or not at all?” (*Medical Assistance With Smoking Cessation* question)
- High cholesterol, as identified by a response to question Q4, “Are you aware you have any of the following?”
- High blood pressure, as identified by a response to question Q4
- Increased risk of heart disease due to family history, as identified by a response to question Q4

Eligible Population

Product lines

Commercial, Medicaid, Medicare (report each product line separately).

Ages

Men 41–79 and women 51–79 as of December 31 of the measurement year.

Continuous enrollment

Commercial: The measurement year.

Medicaid: The last six months of the measurement year.

Medicare: Six months prior to the CMS administration of the survey.

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Allowable gap No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).

Current enrollment Currently enrolled when the survey is completed.

Protocol and Survey Instrument

Commercial, Medicaid Collected annually as part of the CAHPS Health Plan Survey 4.0H, Adult Version.

Medicare Collected by CMS using the Medicare CAHPS survey.

Gender-Dependent Age Band Eligibility Flags

The health plan assigns a Gender-Dependent Age Band Eligibility Flag for each member in the CAHPS 4.0H Adult Survey sample frame data file, as follows.

Gender-Dependent Age Band Eligibility Flags	
1 =	Female age 50 or younger as of December 31 of the measurement year
2 =	Female age 51-64 as of December 31 of the measurement year
3 =	Female age 65-79 as of December 31 of the measurement year
4 =	Female age 80 or older as of December 31 of the measurement year
5 =	Male age 40 or younger as of December 31 of the measurement year
6 =	Male age 41-64 as of December 31 of the measurement year
7 =	Male age 65-79 as of December 31 of the measurement year
8 =	Male age 80 or older as of December 31 of the measurement year

The Gender-Dependent Age Band Eligibility Flags identifies the members eligible for the *Aspirin Use and Discussion* measure rates. Its purpose is to protect member confidentiality (using date of birth information could result in a breach of confidentiality).

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Questions Included in the Measure

The following tables list the questions included in the measure for commercial product lines.

Table ASP-1: Aspirin Use and Discussion—Commercial Product Line

	Question	Response Choices
Q1	Do you take aspirin daily or every other day?	Yes No Don't know
Q2	Do you have a health problem or condition that makes taking aspirin unsafe for you?	Yes No Don't know
Q3	Has a doctor or health provider ever discussed with you the risks and benefits of aspirin to prevent heart attack or stroke?	Yes No
Q4	Are you aware that you have any of the following conditions? (Mark "yes" for all that apply)	High cholesterol (Yes/No) High blood pressure (Yes/No) Parents or siblings with heart disease before the age of 60? (Yes/No)
Q5	Has a doctor ever told you that you have any of the following conditions?	A heart attack? (Yes/No) Angina or coronary heart disease? (Yes/No) A stroke? (Yes/No) Any kind of diabetes or high blood sugar? (Yes/No)

Calculation of Aspirin Use and Discussion

Aspirin Use

Denominator The number of women 65–79 with at least two risk factors for CVD, men 40–64 with at least one risk factor for CVD (based on responses to Q4) and all men 65–79 who did not report a health problem or condition that makes taking aspirin unsafe. Only members with Gender-Dependent Age Band Eligibility Flags of 3, 6 and 7 are included in the measure.

For members with Gender-Dependent Age Band Eligibility Flags of 3 or 6, response choices must be as follows to be included in the denominator:

- Q1 = "Yes" or "No"
- Q2 = "No"

For members with a Gender-Dependent Age Band Eligibility Flag of 7, response choices must be as follows to be included in the denominator:

- Q1 = "Yes" or "No"
- Q2 = "No"

With *either* a response of "Every day" or "Some days" to the *Medical Assistance With Smoking Cessation* question "Do you now smoke cigarettes or use tobacco every day, some days, or not at all?" *or* a "Yes" response of "High cholesterol" or "High blood pressure" or "Parents or siblings with heart disease before the age of 60" to Q4.

Exclude any member with a "Yes" response to any indicator in Q5.

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Numerator The number of members in the denominator who indicated that they currently take aspirin daily or every other day.

Member response choices *must* be as follows to be included in the denominator.

- Q1 = "Yes"

Discussion of Aspirin

Denominator The number of women 50–79 and men 40–79 years of age who had a visit during the measurement year.

Members with Gender-Dependent Age Band Eligibility Flags of 2, 3, 6 and 7 are included in the measure. Member response choices must be as follows to be included in the denominator:

- Q3 = "Yes" or "No"

Exclude any member with a "Yes" response to any indicator in Q5.

Numerator The number of members in the denominator who indicated that their doctor or other provider discussed the risks and benefits of aspirin use to prevent heart attack or stroke.

Member response choices *must* be as follows to be included in the denominator.

- Q3 = "Yes"

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Aspirin Use and Discussion

MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
Measure Description: Measure description should be a concise statement about the measure that includes the specific aspects of healthcare addressed, the level of analysis, care or service settings, the time period (e.g., daily, yearly, monthly) the measure addresses.	**Brief description of measure:** The percentage of men 40–64 who have at least one risk factor for cardiovascular risk (smoker, family history of CVD, BMI >35, high cholesterol, high blood pressure), women 65–79 who have at least two risk factors for CVD and all men 65–79 who currently report taking aspirin; and percentage of women 50–79 and men 40–79 who were counseled about the risks and benefits of aspirin. **Type of measure:** ☐ Process ☒ Patient experience ☐ Use of services ☐ Outcome ☐ Structure ☐ Other ☐ Access
Numerator Statement	The following components of this measure assess different facets of aspirin use and counseling for aspirin use. *Rate 1:* **Current Aspirin Use** — The percentage of members who are currently taking aspirin. A single rate is reported for the denominator, which includes the following groups. • Women 65–79 with at least two risk factors for cardiovascular disease • Men 40–64 with at least one risk factor for cardiovascular disease • Men 65–79 *Rate 2:* **Discussing Aspirin Risks and Benefits** — The percentage of members who discussed the risks and benefits of using aspirin with a doctor or other health provider. A single rate is reported for the denominator, which includes the following groups. • Women 50–79 • Women 40–79
Denominator Statement	**Product Lines:** Commercial, Medicaid, Medicare (report each product line separately). **Ages:** Men 41–79 and women 51–79 as of December 31 of the measurement year. **Continuous Enrollment:** • *Commercial:* The measurement year. • *Medicaid:* The last six months of the measurement year. • *Medicare:* Six months prior to the CMS administration of the survey.
Denominator Exclusions	☐ No exclusions Describe: • *Rate 1:* Members who indicate on question 2 that they have a contraindication to using aspirin • *Rate 2:* No exclusions

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MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
Sampling	If a measure is based on a sample, provide instructions and guidance on sample size. Describe: ____ Minimum sample size: ____ **Instructions:** NCQA outlines the sampling criteria in all of the measures. The complete data collection method and sampling guidelines are outline in NCQA's Technical Specifications General Guidelines section. ☐ Check if no sampling—use all eligible cases
Type of Score	☐ Categorical value ☐ Count ☒ Rate ☐ Other ☐ Continuous variable ☐ Frequency distribution ☐ Ratio
Measure History/Use: Measure history describes past and current state of use of the measure; how long the measure has been used; the vetting process to ensure the integrity of the measure (e.g., use of technical advisory panels, public comment period).	Measure History ☒ Check if measure is not in current use (currently in development) Year the measure was first released: ____ ☐ Release date is unknown Year of most recent revision: ____ ☐ Date of revision unknown What is the frequency for review/update of this measure? ____ When is the next scheduled review/update for this measure? ____ ☐ Used in a reporting initiative Name of initiative: ____ How and where is measure currently used? ____

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<table>
<tr><th colspan="2">MEASURE INFORMATION & SPECIFICATIONS</th></tr>
<tr><td>Measure Title</td><td>Aspirin Use and Discussion</td></tr>
<tr><td>Data Source and Data Collection Methods: Identifies the data source(s) necessary to implement the measure (e.g., administrative data only, clinician survey, medical record only, patient survey only or a hybrid method).
• If more than one data source can be used to calculate the measure, evidence supporting the comparability of the sources should be provided
• For EHRs, provide any additional detail necessary specific for use of the measure in this medium</td><td>Check all that apply.
☐ Claims
☐ Medical record
☐ Registry
☐ Clinical database: Name ________
☐ Pharmacy
☐ Laboratory
☐ Electronic health record
☐ Data collection instrument: Name ________
☒ Patient survey: Name________CAHPS________
☐ Clinician survey: Name________
☐ Observational data (e.g., compliance measures that require observation of practices) ________
☐ Other: ________
☐ Instrument/survey attached URL:________
☐ Data dictionary/code table attached URL: ________

Rationale for using member self-report data
Height, weight, BMI: Overall, the BRFSS report shows height, weight and BMI self-report to be highly reliable and valid (Nelson, 2001), although other studies have shown a tendency to overreport height and underreport weight and BMI (Gorber, 2007; Niedhammer, 2000). Some studies have also demonstrated specific subgroup differences in self-reports of these physical indicators. Mexican Americans have been shown to underreport height, weight and BMI compared with non-Hispanic European Americans (Gillum, 2005). While men overestimate their weight by 1.1 pounds, women underestimate their weight by 3.3 pounds (Villanueva, 2001). Another study found that women overestimate by 4.6 pounds and self-reported height and weight classified 84% of women into the appropriate BMI category (Brunner, 2007).

Blood pressure: Studies done in Spain that compared self-reports of high blood pressure with patients' medical records showed sensitivity of 72.7%–76% and caution against observer error. With this moderate sensitivity percentage, underestimation of one's self-reported high blood pressure cannot be ruled out. Moreover, researchers found underestimation is higher among men and educated people (Tormo, 2000; Mengden, 1998). The Framingham Offspring Study compared participant reports of parental history with parents' medical records. Reviewing mothers' medical records indicated predictive values of 88% for cholesterol and 94% for blood pressure. Similarly, reviewing fathers' medical records indicated predictive values of 78% for cholesterol and 83% for blood pressure. In sum, while sensitivity was low for all items, specificity was high. In other words, while negative family history items were often inaccurate, a positive family history item was predictive and accurate (Murabito, 2004).</td></tr>
</table>

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MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
	Cholesterol: The Framingham Offspring Study compared participant reports of parental history with parents' medical records. Reviewing mothers' medical records indicated predictive values of 88% for cholesterol and 94% for blood pressure. Similarly, reviewing fathers' medical records indicated predictive values of 78% for cholesterol and 83% for blood pressure. In sum, while sensitivity was low for all items, specificity was high. Another study that verified high specificity and low sensitivity found self-report sensitivity measures to have values of 51% and specificity to have values of 89% among older subjects; specifically, with groups of people who have >12 years of education (Natarajan, 2002). Focusing on women, another study showed that women with obesity, smoking, sedentary lifestyles or untreated hypertension have reductions in awareness of their cholesterol levels (Huang, 2007). One study was critical of self-reports and noted poor knowledge of cholesterol among women, non-Whites and patients without college education. Furthermore, patients with multiple cardiac risk factors were no more knowledgeable about their cholesterol values than those without these conditions (Cheng, 2005). ***Smoking:*** Numerous studies have measured the validity of smoking self-reports. One study that assessed validity through measurement of serum cotinine concentrations in the blood showed that validity was similar among subjects of various ages and socioeconomic groups (Vartianinen, 2002). Another study collaborated those findings, with strong sensitivity and good specificity of 97% and 85%, respectively (Mordan, 2005). One study, however, cautioned that while the degree of misreporting was low for current smokers, 20% of self-reported "never" smokers misreport—suggesting that validation may be needed for this group of individuals. Nevertheless, sensitivity was found to be 80.2%, while specificity was found to be 98.9% (Martinez, 2004). ***Aspirin:*** As non-adherent patients have increased cardiovascular morbidity rates, it is important to measure the reliability and validity of self-reports for aspirin use. In a study measuring whether poor efficacy of aspirin was caused by non-adherence of patients in taking their prescribed prescription of aspirin or nonresponse, 16% of the patients were non-adherent. This study shows that self-reporting should be used with caution (Cotter, 2003). National surveys such as BRFSS and NHANES include an aspirin-use question; however, the validity and reliability of these survey items is unknown. Studies have shown poor to fair agreement between self-reported and documented uses of aspirin (including prescription, dosage and frequency). Smith et al (1999) found that agreement between reported use of aspirin and measured use (from blood test) was poor: K = 0.16 (95% CI: 0.0–0.32). Burney et al (1996) found that adherence to instructions for regular aspirin ingestion was 35% (poor). However, these studies have methodological problems such as small sample size and sampling from a young, non-diseased population. Other studies suggest that reliability of self-report for other CVD medications is high. Tisnado et al (2006) showed that agreement between medical record and patient self-reports for medication use (statins, beta-blockers) was "excellent": K = 0.8. Glintborg et al (2007) showed that agreement between patient self-reports, pharmacy records and blood analysis was excellent for five different medications, including statins and beta-blockers.

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MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
	References Brunner, Huber, L.R.. Validity of self-reported height and weight in women of reproductive age. *Maternal Child Health Journal* 2007;11:137-44. Burney, K.D., K. Krishnan, M.T. Ruffin, D. Zhang, D.E. Brenner. Adherence to single daily dose of aspirin in a chemoprevention trial. An evaluation of self-report and microelectronic monitoring. *Arch Fam Med.* May 1996;5(5):297-300. Cheng, S., J.H. Lichtman, J.M. Amatruda, G.L. Smith, J.A. Mattera, S.A. Roumanis, H.M. Krumholz. Knowledge of cholesterol levels and targets in patients with coronary artery disease. *Preventative Cardiology* 2005;8:11-17. Cotter, G., E. Shemesh, M. Zehayi, I. Dinur, A. Rudnick, O. Milo, Z. Vered, R. Krakover, Kaluski E, Kornberg A. of aspirin effect: aspirin resistance or resistance to taking aspirin? *American Heart Journal* 2003;147(2):293-300. Gillum, R.F., C.T. Sempos. Ethnic variation in validity of classification of overweight and obesity using self-reported weight and height in American women and men: the Third National Health and Nutrition Examination Survey. *Nutr J.* 2005;4:27. Glintborg, B., P.R. Hillestrom, L.H. Olsen, K.P. Dalhoff, H.E. Poulsen. Are patients reliable when self-reporting medication use? Validation of structured drug interviews and home visits by drug analysis and prescription data in acutely hospitalized patients. *J Clin Pharmacol.* Nov 2007;47(11):1440-1449. Gorber, S.C., M. Tremblay, D. Moher, B. Gorber. A comparison of direct vs. self-report measures for assessing height, weight and body mass index: a systematic review. *Obesity Reviews.* 2007 July;8(4):307-326. Huang, P.A.., J. Buring, P.M. Ridker, R.J. Glynn. Awareness, accuracy and predictive validity of self-reported cholesterol in women. *Journal of General Internal Medicine* 2007;22:606-613. Martinez, M.E., M. Reid, R. Jiang, J. Einspahr, D.S. Alberts. Accuracy of self-reported smoking status among participants in a chemoprevention trial. *Preventive Medicine*. 2004 Apr;38(4):492-497. Mengden, T., R.M.H. Medina, B. Beltran, E. Alvarez, K. Kraft, H.R. Vetter. Reliability of reporting self-measured blood pressure values by hypertensive patients *Am J Hypertens* 1998;11:1413–1417 Mordan, E., A. Weeks, M. Geffrard, B. Baumann, D. Ziedonis, C. Carmargo, E. Boudreaux. Expired carbon monoxide validation of self-reported smoking among emergency department patients. *Academic Emergency Medicine* 2005; 12:45. Murabito, J.M., B.H. Nam, R.B. D'Agostino, L.J. Donald, C.J. O'Donnell, P. Wilson P. Accuracy of Offspring Reports of Parental Cardiovascular Disease History: The Framingham Offspring Study. 2004 *Annals of Internal Medicine*. 140(6). Natarajan, S., S.R. Lipsitz, P.J. Nietert. Self-report of high cholesterol: determinants of validity in U.S. adults. *Am J Prev Med*. 2002 Jul;23(1):13-21. Nelson, D.E., D. Holtzman, J. Bolen, C.A. Stanwyck, K.A. Mack. Reliability and validity of measures from the Behavioral Risk Factor Surveillance System. *Soz Praventivmed*. 2001;46 Suppl 1:S3-42. Niedhammer, I., I. Bugel, S. Bonenfant, M. Goldberg, A. Leclerc. Validity of self-reported weight and height in the French GAZEL cohort. *International Journal of Obesity* 2000;24:1111-1118. Smith, N.L., B.M. Psaty, S.R. Heckbert, R.P. Tracy, E.S. Cornell. The reliability of medication inventory methods compared to serum levels of cardiovascular drugs in the elderly. *J Clin Epidemiol.* Feb 1999;52(2):143-146. Tisnado, D.M., J.L. Adams, H. Liu, et al. What is the concordance between the medical record and patient self-report as data sources for ambulatory care? *Med Care.* Feb 2006;44(2):132-140. Tormo, M., C. Navarro, M. Chirlaque, X. Barber and the EPIC group of Spain. Validation of self diagnosis of high blood pressure in a sample of the Spanish EPIC cohort: overall agreement and predictive values. *J Epidemiol Community Health* 54(3): 2000;221–226. Villanueva, Elmer V. The validity of self-reported weight in US adults: a population based cross-sectional study. *BMC Public Health* 2001; 1:11.

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MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
Level of Measurement/Analysis: Who or what is being measured.	**Check all that apply; if "Other," describe.** ☐ Individual clinician (e.g., physician, nurse) ☐ Group of clinicians (e.g., facility department/unit, group practice) ☐ Facility (e.g., hospital, nursing home) ☒ Health plan ☐ Integrated delivery system ☐ Community/Population ☐ Other: ____
Applicable Care Settings	**Check all that apply.** ☒ Applies to all health care settings ☐ Home health ☐ Clinician practice/office ☐ Skilled nursing facility ☐ Dialysis centers ☐ Acute care hospital ☐ Community/public health centers ☐ Emergency department/urgent care ☐ Ambulatory surgical centers ☐ Hospice ☐ Other inpatient facility/service (Please describe): ____ ☐ Other outpatient facility/service (Please describe): ____ ☐ Other residential facility/service (Please describe): ____ ☐ Other (Please describe): ____
Stratification to Detect Disparities in Care/ Outcomes: Disparities are seen as differences in health care quality and services.	☒ Check if no stratification If results stratified by population characteristics, describe variables:____
Risk Adjustment (for Outcomes Measures)	Risk adjustment is not applied for this measure at the health plan level. NCQA has determined that risk adjustment is not necessary other than stratifying the measure by insurance coverage type. **Identify Risk Adjustment Variables:** Is there a separate proprietary owner of the risk model? (select one) ☐ Detailed risk model attached URL:____

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<tr><td>Measure Title</td><td>Aspirin Use and Discussion</td></tr>
<tr><td>Similarity to other NQF™-endorsed measures: Is this measure similar to a measure already endorsed by NQF? If yes, please provide a brief explanation of how this measure will complement or perform better than those currently in use.</td><td>☒ Similar to a currently NQF-endorsed™ measure
☐ No prior existing measure
☐ Similar to other endorsed measures (i.e., PCPI and AQA)
☐Other: ____

Name of NQF-endorsed™ or other endorsed measure: ____
• Aspirin at Arrival (0286): Emergency department acute myocardial infarction (AMI) patients or chest pain patients (with probable cardiac chest pain) without aspirin contraindications who received aspirin within 24 hours before ED arrival or prior to transfer. (CMS endorsed process measure)
• Ischemic Vascular Disease(IVD) (0068): Percentage of patients who have documentation of use of aspirin or another antithrombotic during the 12-month measurement period. (NCQA-endorsed process measure)
• Aspirin at Arrival for AMI (0132): AMI patients without aspirin contraindications who received aspirin within 24 hours before or after hospital arrival. (CMS and Joint Commission-endorsed process measure)
• Aspirin Prescribed at Discharge for AMI (0142): AMI patients without aspirin contraindications who are prescribed aspirin at hospital discharge (CMS and Joint Commission-endorsed process measure)

Rationale for creation of new measure: New guidelines from the USPSTF (2008, yet to be released) recommend that men 40 years of age and older and women 50 and older, with certain cardiovascular risk factors, should be counseled about the risks and benefits of aspirin use as a primary prevention strategy for cardiovascular disease. None of the above NQF-endorsed measure addresses the use of aspirin for primary prevention of CVD.</td></tr>
<tr><td>Harmonization: During measure development, what efforts, if any, were undertaken to harmonize this measure with other similar measures?</td><td>No measures exist for the primary prevention of CVD. The measures described above are for secondary prevention. With the guidance of the expert workgroup, this measure is being developed for the HEDIS/CAHPS suite.</td></tr>
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<tr><td>Measure Title</td><td>Aspirin Use and Discussion</td></tr>
<tr><th colspan="2">IMPORTANCE</th></tr>
<tr><td>Priority Areas</td><td>☐ Check if measures does not address a listed priority area.

IOM Priority Area(s): Check all that apply.
☐ Care coordination (cross-cutting)
☐ Self-management/health literacy (cross-cutting)
☐ Asthma
☐ Cancer screening
☐ Children with special health care needs
☐ Diabetes mellitus
☐ End of life
☐ Frailty associated with old age
☐ Hypertension
☐ Immunization
☒ Ischemic heart disease
☐ Major depression
☐ Medication management
☐ Nosocomial infections
☐ Pain control
☐ Pregnancy and childbirth
☐ Severe and persistent mental illness
☐ Stroke
☐ Obesity
☐ Tobacco dependence

Additional Priority Area(s):
☐ Health Information Technology ☐ Patient Safety ☐ Disparities</td></tr>
<tr><td>Opportunity for Improvement (rationale for measure derived from literature searches):
Provide evidence (including citations to source) that demonstrate:
• Health importance (magnitude of problem, severity of consequences)
• Financial importance and cost effectiveness
• Quality gap/room for improvement (underuse, overuse, misuse, overall poor performance/ outcomes, variation in performance/outcomes)</td><td>Coronary heart disease (CHD) was an underlying or contributing cause of death for 451,300 people and in 2004 accounted for 1 of every 5 deaths in the United States. AMI was an underlying or contributing cause of death for 156,000 people (AHA, 2008). In addition, in 2005 the prevalence of CHD for both sexes was nearly 16 million people, or 7.3% of the American population (AHA, 2008) The cost of cardiovascular diseases and stroke in the United States was estimated at $448.5 billion in 2008 (AHA, 2008). This figure includes health expenditures (direct costs such as the cost of physicians and health care practitioners, hospital and nursing home services, medications, home health care and other medical durables) and lost productivity resulting from morbidity and mortality (indirect costs). AMI represents 18% of hospital discharges and 28% of deaths due to heart disease (NHLBI, 2000). Research has shown that costs associated with cardiovascular disease for hospitals are easily $156 billion (AHA, 2008).

From 1979–2003, the percentage of patient discharges from short-stay hospitals, with CHD as the main diagnosis, rose by 31%. Evidence has shown that age is a strong demographic factor for CHD. The average life expectancy has risen by about 2 years since 1965; it is projected that by 2030, 1 in 5 Americans will be 65 or older. The need for CHD management is essential (Berra, 2006). Aspirin treatments reduce MI in men (127 events per 100,000 person-years) and women (17 events per 100,000 person-years) (Grieving, 2008).

While studies have shown Warfarin to be more effective, aspirin is a safer, more convenient and less expensive form of therapy (Patrono, 2004). Aspirin therapy has been shown to directly reduce the odds of cardiovascular events in men by 14% and reduce them by 12% in women (Berger, 2006). Aspirin use reduced the number of strokes by 20%, MI by 30% and other vascular events by 30% (Weisman, 2002).</td></tr>
</table>

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MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
IMPORTANCE	
	Aspirin treatments have been shown to prevent 1 cardiovascular event over an average follow-up of 6.4 years. This means that on average in a 6.4-year period, aspirin therapy results in a benefit of 3 cardiovascular events prevented per 1,000 women and 4 events prevented per 1,000 men (Berger, 2006). Even for patients with peripheral arterial disease, aspirin has been shown to reduce CHD (Kikano, 2007). While people with diabetes who are 65 or older or who are 50–64 with CVD risks (such as smoking, diagnosed hypertension and diagnosed hypercholesterolemia) use aspirin (74% and 78%, respectively), only 60% of the 35–49 age group with CVD risks uses aspirin. In addition, by stratifying by sex, research also shows that while 83% of men with CVD risk use aspirin, only 65% of women with CVD risks do (Persell, 2004). By calculating cost effectiveness and clinically preventable burden, the National Commission on Prevention Priorities (NCPP) determined aspirin use was the topmost effective clinical preventable service (Maciosek, 2006). References American Diabetes Association. Standards of Medical Care in Diabetes—2008. *Diabetes Care* 31:S12-S54, 2008. American Heart Association. *Heart Disease and Stroke Statistics—2008 Update*. http://www.americanheart.org/downloadable/heart/1200082005246HS_Stats%202008.final.pdf. July 15, 2008. Berger, J.S., M.C. Roncaglioni, F. Avanzini. Aspirin for the primary prevention of cardiovascular events in women and men: a sex-specific meta-analysis of randomized controlled trials. *JAMA* 2006;296(4):306-314. Berra K., N.H. Miller, J.M. Fair. Cardiovascular disease prevention and disease management: A critical role for nursing. *J Cardiopulm Rehabil* 2006;26(4):197-206. Grieving, J.P., E. Buskens, H. Koffijberg, A. Algra. Cost-effectiveness of aspirin treatment in the primary prevention of cardiovascular disease events in subgroups based on age, gender and varying cardiovascular risk. *Circulation* 2008;117:2875-2883. Kikano G.E., M.T. Brown. Antiplatelet therapy for atherothrombotic disease: an update for the primary care physician. *Mayo Clin Proc.* May 2007;82(5):583-593. Maciosek, M.V., A.B. Coffield, N.M. Edwards, T.J. Flottemesch, M.J. Goodman, L.I. Solberg. Priorities among effective clinical preventive services: results of a systematic review and analysis. *Am J Prev Med* 2006;31 (1): 52-61. National Institutes of Health, National Heart, Lung and Blood Institute. Morbidity and Mortality: 2000 Chart Book on Cardiovascular, Lung and Blood Diseases. http://www.nhlbi.nih.gov/resources/docs/cht-book.htm Patrono C., B. Coller, G.A. FitzGerald, J. Hirsh, G. Roth. Platelet-Active Drugs: The relationships among dose, effectiveness and side effects: the seventh ACCP Conference on antithrombotic and thrombolytic therapy. *Chest* 2004;126:234-264. Persell S.D., D.W. Baker. Aspirin use among adults with diabetes: recent trends and emerging sex disparities. *Arch Intern Med* 2004;164(22):2492-2499. Weisman S.M., D.Y. Graham. Evaluation of the benefits and risks of low-dose aspirin in the secondary prevention of cardiovascular and cerebrovascular events. *Arch Intern Med.* Oct 28 2002;162(19):2197-2202.

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<table>
<tr><th colspan="2">MEASURE INFORMATION & SPECIFICATIONS</th></tr>
<tr><td>Measure Title</td><td>Aspirin Use and Discussion</td></tr>
<tr><th colspan="2">IMPORTANCE</th></tr>
<tr><td>Health Disparities (Based on evidence from literature reviews)
Provide evidence (including citations to source) that demonstrate disparity in care/outcomes among populations related to the measure focus.</td><td>While disparities in the overall treatment for aspirin therapy are minimal, research shows that in people with a history of strokes and hypercholesterolesterolemia, African-Americans were less likely than Whites to receive aspirin treatment (Ambriz, 2004).
Another study showed that aspirin use in non-Hispanic Whites was significantly higher (adjusted OR of 2.5) than in African-Americans, Mexican Americans and other racial or ethnic groups (Rolka, 2001), in general. While research shows that aspirin medication at discharge did not show disparities, a study focusing on the Medicare subset of the population of people 65 or older showed that African-American patients with AMI are slightly less likely to receive aspirin on admission (RR: 0.97) (Rathore, 2000).
Disparity can also be seen between men and women. In a general population sample, white males and females used aspirin 31% and 28% of the time respectively, while both sexes of African Americans used aspirin 10% of the time (Shahar, 1996).
References
Ambriz, E.H., L.D. Woodard, N.R. Kressin, L.A. Peterson. Use of Smoking Cessation Interventions and Aspirin for Secondary Prevention: Are There Racial Disparities?
American Journal of Medical Quality, July 1, 2004; 19(4): 166 - 171.
Rathore, S.S., A.K. Berger, K.P. Weinfurt, et al. Race, sex, poverty and the medical treatment of acute myocardial infarction in the elderly. Circulation. 2000;102:642–648.
Rolka, D.B., A. Fagot-Campagna, K.M. Narayan. Aspirin use among adults with diabetes: estimates from the Third National Health and Nutrition Examination Survey. Diabetes Care. 2001;24:197–201.
Shahar, E., A.R. Folsom, F.J. Romm, et al. Patterns of aspirin use in middle-aged adults: the Atherosclerosis Risk in Communities (ARIC) Study. Am Heart J. 1996;131:915–922.</td></tr>
<tr><th colspan="2">SCIENTIFIC ACCEPTABILITY</th></tr>
<tr><td>Clinical Practice Guidelines: Cite the guideline references, quote the specific recommendations related to the measure and the authors' assessment of the strength of the evidence and summarize the rationale for using these guidelines over others.
Summarize the evidence (including citations to source) supporting the focus of the measure.
• For <u>access measures</u>, evidence that an association exists between the access measure and the outcome of, or satisfaction with, care
• For <u>outcome measures</u>, evidence that the outcome measure has been influenced by one or more clinical interventions</td><td>☐ Check if measure is not related to a clinical guideline.
Guideline recommendations
ADA:
• Use aspirin therapy (75–162 mg/day) as a primary prevention strategy in those with type 1 or 2 diabetes at increased cardiovascular risk, including those who are 40 years of age or who have additional risk factors (family history of CVD, hypertension, smoking, dyslipidemia or albuminuria). (Level A)
• Use aspirin therapy (75–162 mg/day) as a secondary prevention strategy in those with diabetes with a history of CVD. (Level A)
Level A: Clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered, including:
• Evidence from a well-conducted multicenter trial
• Evidence from a meta-analysis that incorporated quality ratings in the analysis
• Compelling non-experimental evidence (i.e., "all or none" rule developed by the Centre for Evidence-Based Medicine at Oxford)
• Supportive evidence from well-conducted randomized controlled trials (RCT) that are adequately powered, including:
– Evidence from a well-conducted trial at one or more institutions
– Evidence from a meta-analysis that incorporated quality ratings in the analysis</td></tr>
</table>

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MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
SCIENTIFIC ACCEPTABILITY	
• For **patient experience** measures, evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public • For **process** measures, evidence that the measured clinical or administrative process let to improved health or cost/benefit • For **structural** measures, evidence that the structure supports the consistent delivery of effective processes that lead to improved health or cost/benefit	***AHA/ACC:*** Start aspirin 75–162 mg/d and continue indefinitely in all patients with coronary and other vascular disease unless contraindicated. *(Class I, Level A)* ***Class I, Level A:*** Conditions for which there is evidence or general agreement that a given procedure or treatment is beneficial, useful and effective. ***ICSI:*** Aspirin should be prescribed to all patients with stable coronary disease. Use clopidogrel if a patient is aspirin intolerant. *(Class A; Grade I)* ***Class A:*** RCT. ***Grade I :*** The evidence consists of results from studies of strong design for answering the question addressed. Results are both clinically important and consistent with minor exceptions, at most, and are free of any significant doubts about generalizability, bias and flaws in research design. Studies with negative results have sufficiently large samples to have adequate statistical power. ***USPSTF:*** The U.S. Preventive Services Task Force (USPSTF) strongly recommends that clinicians discuss aspirin chemoprevention with adults who are at increased risk (5-year risk of ≥3%) for CHD. Discussions with patients should address both the potential benefits and harms of aspirin therapy. *("A" recommendation)* ***"A" recommendation:*** The USPSTF found good evidence that aspirin decreases the incidence of CHD in adults who are at increased risk for heart disease. They also found good evidence that aspirin increases the incidence of gastrointestinal bleeding and fair evidence that aspirin increases the incidence of hemorrhagic strokes. The USPSTF concluded that the balance of benefits and harms is most favorable in patients at high risk of CHD (5-year risk of ≥3%), but is also influenced by patient preferences. ***VA/DoD:*** • Ensure that all patients with ischemic heart disease or angina symptoms receive antiplatelet therapy (aspirin 81–325 mg/day). • For patients who require Warfarin therapy, aspirin may be safely used at a dose of 80 mg/day. • If use of aspirin is contraindicated, clopidogrel (75 mg/day) may be used. *(Quality of Evidence = I; Strength of Recommendation = A)* ***Quality of Evidence = I*** Evidence is obtained from at least one properly randomized controlled trial. ***Strength of Recommendation = A*** A strong recommendation, based on evidence or general agreement, that a given procedure or treatment is useful/effective, always acceptable and usually indicated. ***AHA/ASA:*** Aspirin use is recommended for cardiovascular (including, but not specific to, stroke) prophylaxis among persons whose risk is sufficiently high for the benefits to outweigh the risks associated with treatment (a 10-year risk of cardiovascular events of 6%–10%). *(Class I: Level A)* ***Class I, Level A:*** • Conditions for which there is evidence for or general agreement that the procedure or treatment is useful and effective. • Data derived from multiple RCTs.

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MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
SCIENTIFIC ACCEPTABILITY	
	ACCP: • For long-term treatment after PCI, the guideline developers recommend aspirin, 75–162 mg/day. *(Grade 1A)* • For long-term treatment after PCI in patients who receive antithrombotic agents such as clopidogrel or Warfarin, the guideline developers recommend lower-dose aspirin, 75–100 mg/day. *(Grade 1C+)* • For patients with ischemic stroke who are not receiving thrombolysis, the guideline developers recommend early aspirin therapy, 160–325 mg/day *(Grade 1A)* *Grade 1A:* RCTs without important limitations ***Implications:*** Strong recommendation; can apply to most patients in most circumstances without reservation *Grade 1C+:* No RCT, but strong RCT results can be unequivocally extrapolated, or overwhelming evidence from observational studies ***Implications:*** Strong recommendation; can apply to most patients in most circumstances *Grade 1A:* RCTs without important limitations ***Implications:*** Strong recommendation; can apply to most patients in most circumstances without reservation **Rationale for using guideline:** It is NCQA policy to use evidence-based guidelines that apply to physicians and other health care providers and developed by a national specialty organization or government agency. Generally, a crosswalk is developed to identify consistencies and differences.
Evidence Supporting This Measure Topic and *Strength of Evidence*	☒ Check if same as above Overall Grade for Strength of Evidence: __________________
Controversy/Contradictory Evidence: Summarize any areas of controversy, contradictory evidence or contradictory guidelines, with references. Also discuss how areas of controversy are being addressed.	☒ No areas of controversy Summary: ____

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<tr><th colspan="2">SCIENTIFIC ACCEPTABILITY</th></tr>
<tr><td>Measure Testing/Current Performance: Include results from field-tests in this section. Include field-test data that may indicate that gaps in care or room for improvement exists.</td><td>☐ Check if measure has not been tested and describe testing plans below.
What type of testing has been conducted? Check all that apply.
<u>For each test,</u> summarize the test, including statistical results, sample characteristics and size (patients and sites), method and any modifications as a result of the testing.
☐ Potential for improvement/variation
☒ Pilot/field testing
☐ Reliability testing
☐ Validity testing
☐ Audit for accuracy
☐ Testing to compare data source
☐ If measure is in current use, provide data on measure performance
If the measure has not been tested, summarize test plans: Survey items to assess use of aspirin, exclusions for aspirin use, discussion of aspirin and presence of CV risk factors are being tested in a cognitive test.</td></tr>
<tr><td>Testing of Risk Adjustment (for outcome measures)</td><td>☒ Check if need for risk adjustment was not tested
Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjust method.
Sample characteristics and size (patients and sites): ____
Method: ____
Statistical results: ____
Conclusions/modifications: ____</td></tr>
<tr><th colspan="2">FEASIBILITY</th></tr>
<tr><td>Feasibility: Discuss whether the measure is precisely specified, logistically feasible and auditable. Information gathered from the field-test (related to these themes) may be discussed in this section.</td><td>Precisely specified: This measure has detailed, precise specifications that clearly define the numerator, denominator, data sources, allowable values, methods of measurement and method of reporting.
Logistically feasible: This is a survey measure and found to be logistically feasible as administered through CAHPS. '
Auditable: CAHPS sample-frame generation is auditable.</td></tr>
<tr><td>Cost/administrative burden to implement measure</td><td>☐ Check if cost/administrative burden has not been assessed.
CAHPS is already administered. This measure would entail adding questions to an existing survey.</td></tr>
</table>

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MEASURE INFORMATION & SPECIFICATIONS	
Measure Title	Aspirin Use and Discussion
FEASIBILITY	
Confidentiality	**How is patient confidentiality protected during data collection and reporting?** This measure does not pose a threat to confidentiality. Eligibility criteria are based solely on age. The usual methods employed to protect data confidentiality are expected to be appropriate for this measure. Information about individual members cannot be identified by public reporting.
USABILITY	
Interpretation of Score: Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval or a passing score.	Check one. ☒ Better quality is associated with a higher score ☐ Better quality is associated with a lower score ☐ A passing score defines better quality ☐ Better quality is associated w/ score in set range ☐ Other
Evidence of Interpretability: What evidence is there that the results are understood and used (evidence does not need to be graded)? Summarize the evidence (including citations to source) or testing results that demonstrates the interpretability and usefulness of the measure data by the potential users of the data.	☐ Check if interpretability has not been tested Interpretability was tested in cognitive testing.
References: Use parenthetical citations throughout the document.	Listed in each section.

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