



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to subcriterion 1b).

Brief Measure Information

NQF #: 0543

Corresponding Measures:

De.2. Measure Title: Adherence to Statin Therapy for Individuals with Cardiovascular Disease

Co.1.1. Measure Steward: Centers for Medicare & Medicaid Services

De.3. Brief Description of Measure: The percentage of individuals with cardiovascular disease (CVD), including coronary artery disease, cerebrovascular disease, and peripheral artery disease presumed to be of atherosclerotic origin, who are prescribed statin therapy that had a Proportion of Days Covered (PDC) for statin medications of at least 0.8 during the measurement period (12 consecutive months).

1b.1. Developer Rationale: Several important benefits related to quality improvement are envisioned with the implementation of this measure. Specifically, the measure will help providers to identify individuals with CVD of atherosclerotic origin who are not adherent (at a critical threshold of a PDC of 0.8 or greater) to statins. Furthermore, this measure will encourage providers to develop communication and education tools and processes to improve adherence to statins in their patients with CVD. Higher statin adherence rates are expected to result in lower rates of hyperlipidemia, cardiovascular events, and mortality. Adoption of this performance measure has the potential to improve quality of care for individuals with cardiovascular disease of atherosclerotic origin and, therefore, advance quality of care by engaging patients as partners in their care, a priority area identified in the National Quality Strategy.

S.4. Numerator Statement: Individuals with CVD who had at least two prescription drug claims for statins and have a PDC for statin medications of at least 0.8

S.7. Denominator Statement: Individuals at least 21 years of age as of the beginning of the measurement period with CVD (including coronary artery disease, cerebrovascular disease, and peripheral artery disease presumed to be of atherosclerotic origin) and at least two claims for statins during the measurement period (12 consecutive months)

S.10. Denominator Exclusions: Not Applicable

De.1. Measure Type: Process

S.23. Data Source: Claims

S.26. Level of Analysis: Clinician : Group/Practice, Health Plan, Integrated Delivery System, Population : Regional and State

IF Endorsement Maintenance – Original Endorsement Date: Aug 05, 2009 **Most Recent Endorsement Date:** Aug 05, 2009

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? Not Applicable

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. **Measures must be judged to meet all subcriteria to pass this criterion and be evaluated against the remaining criteria.**

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[4_-_NQF_0543_Evidence_Forms-635476976277567468.docx](#)

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., the benefits or improvements in quality envisioned by use of this measure)

Several important benefits related to quality improvement are envisioned with the implementation of this measure. Specifically, the measure will help providers to identify individuals with CVD of atherosclerotic origin who are not adherent (at a critical threshold of a PDC of 0.8 or greater) to statins. Furthermore, this measure will encourage providers to develop communication and education tools and processes to improve adherence to statins in their patients with CVD. Higher statin adherence rates are expected to result in lower rates of hyperlipidemia, cardiovascular events, and mortality. Adoption of this performance measure has the potential to improve quality of care for individuals with cardiovascular disease of atherosclerotic origin and, therefore, advance quality of care by engaging patients as partners in their care, a priority area identified in the National Quality Strategy.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for endorsement maintenance. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included). This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.*

All Medicare Parts A, B, and D claims data during calendar years 2011 and 2012 from 10 states (Arizona, Delaware, Florida, Iowa, Indiana, Mississippi, Missouri, Rhode Island, Texas, and Washington) were used; the sample consisted of 14,162,440 Medicare beneficiaries and 83 Prescription Drug Plans (Part D plans). Following attribution of the measure denominator, 10 states, 59 Prescription Drug Plans, and 3,259 physician groups had at least one beneficiary attributed. Requiring at least 10 individuals per unit of measurement resulted in 10 states, 38 Prescription Drug Plans, 434 physician groups, and 31 ACOs. The distributions for each are presented below.

States

Year / n / Mean / Median / Min / Max / STD / IQR / P10 / P25 / P50 / P75 / P90

2012 / 10 / 72.0% / 72.8% / 65.3% / 78.0% / 3.7% / 4.9% / 66.4% / 69.6% / 72.8% / 74.5% / 76.4%

Prescription Drug Plans

Year / n / Mean / Median / Min / Max / STD / IQR / P10 / P25 / P50 / P75 / P90

2012 / 39 / 72.1% / 73.0% / 59.7% / 80.9% / 4.9% / 6.5% / 64.6% / 69.3% / 73.0% / 75.9% / 78.2%

Physician Groups

Year / n / Mean / Median / Min / Max / STD / IQR / P10 / P25 / P50 / P75 / P90

2012 / 344 / 71.0% / 71.3% / 53.2% / 84.6% / 5.1% / 6.6% / 64.2% / 68.1% / 71.3% / 74.7% / 77.2%

ACOs

Sample Characteristics: Parts A, B, and D data for 707,677 beneficiaries (2,044 who met the denominator criteria) attributed to 31 ACOs from calendar year 2011.

Year / n / Mean / Median / Min / Max / STD / IQR / P10 / P25 / P50 / P75 / P90

2011 / 30 / 71.2% / 71.5% / 60.8% / 78.7% / 4.5% / 5.9% / 65.7% / 68.5% / 71.5% / 74.4% / 76.7%

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

Not applicable; performance data are reported in Section 1b.2.

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. *(This is required for endorsement maintenance. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities)*

include.) This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.

Category or Cohort / Numerator / Denominator / Measure Rate

All Ages / 387,491 / 550,386 / 70.4%

White / 335,832 / 465,959 / 72.1%

African American / 26,233 / 45,205 / 58.0%

Hispanic / 15,743 / 25,059 / 62.8%

Other / 9,683 / 14,163 / 68.4%

21 – 24 / 8 / 23 / 34.8%

White / 6 / 8 / 75.0%

African American / 0 / 9 / 0.0%

Hispanic / 1 / 4 / 25.0%

Other / 1 / 2 / 50.0%

25 – 44 / 2,221 / 4,187 / 53.0%

White / 1,537 / 2,713 / 56.7%

African American / 432 / 1,000 / 43.2%

Hispanic / 190 / 350 / 54.3%

Other / 62 / 124 / 50.0%

45 – 64 / 42,902 / 67,861 / 63.2%

White / 32,565 / 49,076 / 66.4%

African American / 6,931 / 13,193 / 52.5%

Hispanic / 2,146 / 3,598 / 59.6%

Other / 1,260 / 1,994 / 63.2%

65 – 74 / 160,039 / 224,879 / 71.2%

White / 141,537 / 195,117 / 72.5%

African American / 9,426 / 15,903 / 59.3%

Hispanic / 4,850 / 7,723 / 62.8%

Other / 4,226 / 6,136 / 68.9%

75 – 84 / 132,645 / 184,677 / 71.8%

White / 116,781 / 159,887 / 73.0%

African American / 7,004 / 11,263 / 62.2%

Hispanic / 5,665 / 8,944 / 63.3%

Other / 3,195 / 4,583 / 69.7%

85+ / 49,676 / 68,759 / 72.2%

White / 43,406 / 59,158 / 73.4%

African American / 2,440 / 3,837 / 63.6%

Hispanic / 2,891 / 4,440 / 65.1%

Other / 939 / 1,324 / 70.9%

Rates by Age and Dual Eligible Status for the Entire 10-State Sample

Category or Cohort / Numerator / Denominator / Measure Rate

Dual Eligible / 108,072 / 162,209 / 66.6%

21 – 24 / 7 / 22 / 31.8%

25 – 44 / 1,764 / 3,276 / 53.8%

45 – 64 / 26,776 / 42,258 / 63.4%

65 – 74 / 36,384 / 53,982 / 67.4%

75 – 84 / 31,093 / 45,437 / 68.4%

85+ / 12,048 / 17,234 / 69.9%

Not Dual Eligible / 279,419 / 388,177 / 72.0%

21 – 24 / 1 / 1 / 100.0%

25 – 44 / 457 / 911 / 50.2%

45 – 64 / 16,126 / 25,603 / 63.0%

65 – 74 / 123,655 / 170,897 / 72.4%

75 – 84 / 101,552 / 139,240 / 72.9%

85+ / 37,628 / 51,525 / 73.0%

African Americans had significantly lower rates of adherence and comparisons were statistically different ($p\text{-value}\leq 0.0001$) across all race groups. In general, African Americans had the lowest rates, while Whites had the highest rates across all age groups.

Adherence rates increased with age. Patients 25-44 years of age had a measure rate of 53.0%, while those 85 years of age and older had a rate of 72.2%. There were statistically significant differences between all age groups ($p\text{-value}\leq 0.0328$), except patients 75-84 versus patients 85 and older. Comparisons for the 21-24 age group were not included due to the small sample size.

In addition, the measure rates were significantly different ($\chi^2=1,576$, $p\text{-value}<0.0001$) between dual eligible and non-dual eligible beneficiaries.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations.

Not applicable; data are reported in Section 1b.4.

1c. High Priority (previously referred to as High Impact)

The measure addresses:

- a specific national health goal/priority identified by DHHS or the National Priorities Partnership convened by NQF; OR
- a demonstrated high-priority (high-impact) aspect of healthcare (e.g., affects large numbers of patients and/or has a substantial impact for a smaller population; leading cause of morbidity/mortality; high resource use (current and/or future); severity of illness; and severity of patient/societal consequences of poor quality).

1c.1. Demonstrated high priority aspect of healthcare

Affects large numbers, A leading cause of morbidity/mortality, High resource use, Other

1c.2. If Other: Related to National Priorities

1c.3. Provide epidemiologic or resource use data that demonstrates the measure addresses a high priority aspect of healthcare.

List citations in 1c.4.

OVERVIEW

Based on 2007-2010 data, the number of persons (prevalence) with coronary heart disease and stroke in U.S. adults aged 20 years of age and older was 15.4 million (6.4%) and 6.8 million (2.8%), respectively (American Heart Association, 2013). Patients with CVD of atherosclerotic origin require long-term treatment with statins to lower their risk of adverse cardiovascular events and mortality.

EFFICACY OF STATINS FOR INDIVIDUALS WITH CARDIOVASCULAR DISEASE

Substantial evidence exists to support the positive effect of statin therapy on CVD outcomes, as described in the "ACCF/AHA/ACP/AATS/PCNA/SCAI/STS Guideline for the Diagnosis and Management of Patients With Stable Ischemic Heart Disease" (Fihn et al., 2012) and articles from multiple clinical trials cited in the guideline (The ALLHAT Officers, 2002; Cannon et al., 2004; Heart Protection Study Collaborative Group, 2002; LaRosa et al., 2005; LIPID Study Group, 1998; Pedersen et al., 2005; Sacks et al., 1996; Scandinavian Simvastatin Survival Study Group, 1994; Sever et al., 2003; Shepherd et al., 2002).

AFFECTS LARGE NUMBERS

Recent statistics provide strong evidence of the high prevalence of CVD. Based on the National Health and Nutrition Examination Survey (NHANES) data from 2007-2010 (American Heart Association, 2014), an estimated 15.4 million adults aged 20 years of age and older in the United States have coronary heart disease (CHD). Included in this estimate are 6.8 million persons who have had any type of stroke. Prevalence of CHD is higher in men at 7.9% when compared to women (5.1%), while the prevalence of stroke is similar in men and women (2.7% and 2.8%, respectively). Based on the Behavioral Risk Factor Surveillance System (BRFSS) (Centers

for Disease Control and Prevention, 2011), the prevalence of CHD in the U.S. was 7.1% and 19.8% in persons 45-64 and ≥65 years of age, respectively, in 2010. Based on BRFSS, the prevalence of stroke in 2010 was 2.9% and 8.3% in persons 45-64 and ≥65 years of age, respectively. For non-Hispanic whites and Mexican Americans, the prevalence of CHD in men is higher than in women (8.2% vs. 4.6% in non-Hispanic whites and 6.7% vs. 5.3% in Mexican Americans). For non-Hispanic blacks, women have a higher prevalence of CHD than men (7.1% vs. 6.8%). The prevalence of stroke is highest in non-Hispanic blacks, followed by Hispanics of any race and non-Hispanic whites (3.9%, 2.5%, and 2.4%, respectively).

A LEADING CAUSE OF MORBIDITY/MORTALITY

In 2010, diseases of the heart were the leading cause of death in the U.S. with 514,323 deaths and cerebrovascular disease was the fourth leading cause of death with 109,119 deaths (Heron, 2013). Data from the 2007-2010 NHANES showed the overall prevalence of AMI is 2.9% in U.S. adults (aged 20 years and older) (American Heart Association, 2013). Prevalence of AMI is higher for men (4.2%) than women (1.7%). The American Heart Association (2014) estimates that in 2014, about 620,000 Americans will have a new coronary attack (defined as “first hospitalized AMI or CHD death”) and about 295,000 will have a recurrent attack. About 795,000 Americans will experience a new (610,000) or recurrent (185,000) stroke each year (American Heart Association, 2014).

HIGH RESOURCE USE

According to the American Heart Association (2014), there were 11,921,000 and 2,207,000 ambulatory care visits for CHD and stroke, respectively, in 2010. Furthermore, 1,346,000 and 1,015,000 hospitalizations occurred for CHD and stroke, respectively, in 2010 among persons of all ages. The annual estimated cost (direct and indirect) of CHD in 2010 and stroke in 2009 were \$204.4 billion and \$38.6 billion, respectively. Among Medicare beneficiaries, \$11.7 billion was paid in 2006 for in-hospital costs associated with CHD. Direct medical costs attributable to secondary acute myocardial infarction (AMI) or ischemic stroke among persons with established atherosclerotic conditions have been estimated from 1995-1998 data as follows: \$19,056 in the AMI cohort having a private insurance (commercial; n = 344), \$16,845 in the AMI cohort having government insurance (Medicare, age ≥65 years; n = 200), \$10,267 for stroke commercial (n = 108), \$16,280 for stroke Medicare (n = 113), \$15,224 for peripheral arterial disease commercial (n = 170), and \$15,182 for peripheral arterial disease Medicare (n = 208) (Sloss et al., 2004).

In a study of patients aged ≥35 years of age who had a claim for a cardiovascular event in 2003, patients with non-fatal AMI incurred significant costs in the month of their cardiovascular event and maintained higher costs relative to matched controls throughout their lifetime (O’Sullivan et al., 2011). In the month of the AMI, attributable costs were about \$34,200 (O’Sullivan et al., 2011). Cumulative attributable costs remained higher for those experiencing non-fatal AMI when compared to controls over 36 months (12-month: \$55,500; 24-month \$64,900 and 36-month: \$73,300) (O’Sullivan et al., 2011). Lifetime attributable costs for a non-fatal AMI were \$55,400 (O’Sullivan et al., 2011).

RELATED TO NATIONAL PRIORITIES

This measure (NQF 0543) relates to adherence to statins among individuals with atherosclerotic CVD. The National Quality Forum’s Measure Prioritization Advisory Committee ranked ischemic heart disease third and stroke/transient ischemic attack (TIA) fifth in a list of the top 20 high-impact Medicare conditions identified on the basis of cost, prevalence, variability, improvability, and disparities (National Quality Forum, 2013). Furthermore, two priorities identified by the National Quality Strategy for quality improvement in the nation’s healthcare system relate to the focus of this measure: “ensuring that each person and family is engaged as partners in their care” (#2) and “promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease” (#4) (U.S. Department of Health and Human Services, 2012, 2013). Therefore, national priorities support the potential high impact of this measure.

1c.4. Citations for data demonstrating high priority provided in 1a.3

The ALLHAT Officers. (2002). Major outcomes in moderately hypercholesterolemic, hypertensive patients randomized to pravastatin vs usual care. *Journal of the American Medical Association*, 288, 2998-3007.

American Heart Association. (2013). Heart disease and stroke statistics--2013 update. *Circulation*, 127(1), e6-e245.

American Heart Association. (2014). Heart disease and stroke statistics--2014 update. *Circulation*, 129(3), e28-e292. doi: 10.1161/01.cir.0000441139.02102.80

Cannon, C. P., Braunwald, E., McCabe, C. H., Rader, D. J., Rouleau, J. L., Belder, R., . . . Skene, A. M. (2004). Intensive versus moderate lipid lowering with statins after acute coronary syndromes. *New England Journal of Medicine*, 350(15), 1495-1504.

Centers for Disease Control and Prevention. (2011). Prevalence of coronary heart disease--United States, 2006-2010. *MMWR* 2011. 60. 1377-1382. Retrieved May 21, 2014, from <http://www.cdc.gov/mmwr/pdf/wk/mm6040.pdf>

Fihn, S. D., Gardin, J. M., Abrams, J., Berra, K., Blankenship, J. C., Douglas, P. S., . . . King, S. B. (2012). 2012

ACCF/AHA/ACP/AATS/PCNA/SCAI/STS Guideline for the Diagnosis and Management of Patients With Stable Ischemic Heart Disease.

A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines, and the American College of Physicians, American Association for Thoracic Surgery, Preventive Cardiovascular Nurses Association, Society for Cardiovascular Angiography and Interventions, and Society of Thoracic Surgeons. *Journal of the American College of Cardiology*, 60(24), e44-e164.

Heart Protection Study Collaborative Group. (2002). MRC/BHF Heart Protection Study of cholesterol lowering with simvastatin in 20536 high-risk individuals: A randomised placebo-controlled trial. *The Lancet*, 360, 7-22.

Heron, M. (2013). Deaths: Leading causes for 2010. *National vital statistics reports*. 62(6), Hyattsville, MD: National Center for Health Statistics.

LaRosa, J. C., Grundy, S. M., Waters, D. D., Shear, C., Barter, P., Fruchart, J.-C., . . . Wenger, N. K. (2005). Intensive lipid lowering with atorvastatin in patients with stable coronary disease. *New England Journal of Medicine*, 352(14), 1425-1435.

LIPID Study Group. (1998). Prevention of cardiovascular events and death with Pravastatin in patients with coronary heart disease and a broad range of initial cholesterol levels. *New England Journal of Medicine*, 339(19), 1349-1357.

National Quality Forum. (2013). Report from National Quality Forum: 2012 NQF Measure GAP Analysis. Washington, DC.

O'Sullivan, A., Rubin, J., Nyambose, J., Kuznik, A., Cohen, D., & Thompson, D. (2011). Cost estimation of cardiovascular disease events in the U.S. *Pharmacoeconomics*, 29(8), 693-704.

Pedersen, T. R., Faergeman, O., Kastelein, J. J. P., Olsson, A. G., Tikkanen, M. J., Holme, I., . . . Tsai, J. (2005). High-dose atorvastatin vs usual-dose simvastatin for secondary prevention after myocardial infarction - The IDEAL Study: A randomized controlled trial. *Journal of the American Medical Association*, 294(19), 2437-2446.

Sacks, F. M., Pfeffer, M. A., Moye, L. A., Rouleau, J. L., Rutherford, J. D., Cole, T. G., . . . Braunwald, E. (1996). The effect of Pravastatin on coronary events after myocardial infarction in patients with average cholesterol levels. *New England Journal of Medicine*, 335(14).

Scandinavian Simvastatin Survival Study Group. (1994). Randomised trial of cholesterol lowering in 4444 patients with coronary heart disease: The Scandinavian Simvastatin Survival Study (4S). *The Lancet*, 344, 1384-1389.

Sever, P. S., Dahlöf, B., Poulter, N. R., Wedel, H., Beevers, G., Caulfield, M., . . . Östergren, J. (2003). Prevention of coronary and stroke events with atorvastatin in hypertensive patients who have average or lower-than-average cholesterol concentrations, in the Anglo-Scandinavian Cardiac Outcomes Trial—Lipid Lowering Arm (ASCOT-LLA): A multicentre randomised controlled trial. *The Lancet*, 361(9364), 1149-1158. doi: 10.1016/s0140-6736(03)12948-0

Shepherd, J., Blauw, G. J., Murphy, M. B., Bollen, E. L. E. M., Buckley, B. M., Cobbe, S. M., . . . Westendorp, R. G. J. (2002). Pravastatin in elderly individuals at risk of vascular disease (PROSPER): A randomised controlled trial. *The Lancet*, 360(9346), 1623-1630. doi: 10.1016/s0140-6736(02)11600-x

Sloss, E. M., Wickstrom, S. L., McCaffrey, D. F., Garber, S., Rector, T. S., Levin, R. A., . . . Vickrey, B. G. (2004). Direct medical costs attributable to acute myocardial infarction and ischemic stroke in cohorts with atherosclerotic conditions. *Cerebrovascular Diseases*, 18(1), 8-15.

U.S. Department of Health and Human Services. (2012). National strategy for quality improvement in healthcare: 2012 Annual Report to Congress. Washington, DC: U.S. Department of Health and Human Services.

U.S. Department of Health and Human Services. (2013). National Strategy for Quality Improvement in Healthcare: 2013 Annual Report to Congress. Washington, DC: U.S. Department of Health and Human Services.

1c.5. If a PRO-PM (e.g. HRQoL/functional status, symptom/burden, experience with care, health-related behaviors), provide evidence that the target population values the measured PRO and finds it meaningful. (Describe how and from whom their input was obtained.)

Not Applicable

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the subcriteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

Cardiovascular

De.6. Non-Condition Specific (check all the areas that apply):

Disparities Sensitive, Safety : Medication

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

Not Applicable

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: 2014_NQF_0543_Code_Tables.xlsx

S.3. For endorsement maintenance, please briefly describe any changes to the measure specifications since last endorsement date and explain the reasons.

The measure was aligned with the 2013 ACC/AHA guidelines for cholesterol (Stone et al., 2013). Specific changes include:

1. Eligible Population = Age criteria modified from ≥ 18 years of age to ≥ 21 years of age
2. Eligible Population = Expanded from patients with coronary artery disease (CAD) to all patients with clinical atherosclerotic cardiovascular disease (ASCVD). Clinical ASCVD includes acute coronary syndromes, history of myocardial infarction (MI), stable or unstable angina, coronary or other arterial revascularization, stroke, TIA, or peripheral arterial disease presumed to be of atherosclerotic origin.
3. Code sets were updated for use with 2013 administrative claims data.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome)

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.

Individuals with CVD who had at least two prescription drug claims for statins and have a PDC for statin medications of at least 0.8

S.5. Time Period for Data (What is the time period in which data will be aggregated for the measure, e.g., 12 mo, 3 years, look back to August for flu vaccination? Note if there are different time periods for the numerator and denominator.)

We define this as any time during the measurement period (12 consecutive months).

S.6. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.

The numerator is defined as individuals with a PDC of 0.8 or greater.

The PDC is calculated as follows:

PDC NUMERATOR: The PDC numerator is the sum of the days covered by the days' supply of all statin prescriptions. The period covered by the PDC starts on the day the first prescription is filled (index date) and lasts through the end of the measurement period, or death, whichever comes first. For prescriptions with a days' supply that extends beyond the end of the measurement period, count only the days for which the drug was available to the individual during the measurement period. If there are prescriptions for the same drug (generic name) on the same date of service, keep the prescription with the largest days' supply. If prescriptions for the same drug (generic name) overlap, then adjust the prescription start date to be the day after the previous fill has ended.

PDC DENOMINATOR: The PDC denominator is the number of days from the first prescription date through the end of the

measurement period, or death date, whichever comes first.

S.7. Denominator Statement *(Brief, narrative description of the target population being measured)*

Individuals at least 21 years of age as of the beginning of the measurement period with CVD (including coronary artery disease, cerebrovascular disease, and peripheral artery disease presumed to be of atherosclerotic origin) and at least two claims for statins during the measurement period (12 consecutive months)

S.8. Target Population Category *(Check all the populations for which the measure is specified and tested if any):*

Elderly, Populations at Risk, Populations at Risk : Dual eligible beneficiaries

S.9. Denominator Details *(All information required to identify and calculate the target population/denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)*

IDENTIFICATION OF CARDIOVASCULAR DISEASE

Individuals with CVD are identified by having a diagnosis of CVD within the inpatient or outpatient claims data. Individuals must have:

At least two face-to-face encounters with a diagnosis of CVD with different dates of service in an outpatient setting or non-acute inpatient setting during the measurement period;

Or

At least one face-to-face encounter with a diagnosis of CVD in an acute inpatient or emergency department setting during the measurement period.

CODES USED TO IDENTIFY CVD DIAGNOSIS:

ICD-9-CM: 410.xx, 411.0, 411.1, 411.81, 411.89, 412, 413.0, 413.9, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.2, 414.3, 414.4, 414.8, 414.9, 433.xx, 434.xx, 435.xx, 436.xx, 437.0, 437.1, 440.xx, V45.81, V45.82

ICD-9-CM Procedure Code: 36.xx

ICD-10-CM: I20.1, I20.8, I20.9, I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I22.0, I22.1, I22.2, I22.8, I22.9, I24.0, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.2, I25.5, I25.6, I25.700, I25.701, I25.708, I25.709, I25.710, I25.711, I25.718, I25.719, I25.720, I25.721, I25.728, I25.729, I25.730, I25.731, I25.738, I25.739, I25.750, I25.751, I25.758, I25.759, I25.760, I25.761, I25.768, I25.769, I25.790, I25.791, I25.798, I25.799, I25.810, I25.811, I25.812, I25.89, I25.9, I65.1, I63.02, I63.12, I63.22, I65.21, I65.22, I65.23, I65.29, I63.031, I63.032, I63.039, I63.131, I63.132, I63.139, I63.231, I63.232, I63.239, I65.01, I65.02, I65.03, I65.09, I63.011, I63.012, I63.019, I63.111, I63.112, I63.119, I63.211, I63.212, I63.219, I65.8, I63.59, I65.8, I63.09, I63.19, I63.59, I65.9, I63.00, I63.10, I63.20, I63.29, I66.01, I66.02, I66.03, I66.09, I66.11, I66.12, I66.13, I66.19, I66.21, I66.22, I66.23, I66.29, I66.3, I63.30, I63.311, I63.312, I63.319, I63.321, I63.322, I63.329, I63.331, I63.332, I63.339, I63.341, I63.342, I63.349, I63.39, I63.6, I66.01, I66.02, I66.03, I66.09, I66.11, I66.12, I66.13, I66.19, I66.21, I66.22, I66.23, I66.29, I66.3, I66.8, I66.9, I63.50, I63.511, I63.512, I63.519, I63.521, I63.522, I63.529, I63.531, I63.532, I63.539, I63.541, I63.542, I63.549, I63.59, I63.8, I63.9, G45.0, G45.0, G45.8, G45.0, G45.1, G45.2, G45.8, G46.0, G46.1, G46.2, G45.9, I67.841, I67.848, I67.89, I67.2, I67.81, I67.82, I67.89, I70.201, I70.202, I70.203, I70.208, I70.209, I70.211, I70.212, I70.213, I70.218, I70.219, I70.221, I70.222, I70.223, I70.228, I70.229, I70.231, I70.232, I70.233, I70.234, I70.235, I70.238, I70.239, I70.241, I70.242, I70.243, I70.244, I70.245, I70.248, I70.249, I70.25, I70.261, I70.262, I70.263, I70.268, I70.269, I70.291, I70.292, I70.293, I70.298, I70.299, I70.301, I70.302, I70.303, I70.308, I70.309, I70.311, I70.312, I70.313, I70.318, I70.319, I70.321, I70.322, I70.323, I70.328, I70.329, I70.331, I70.332, I70.333, I70.334, I70.335, I70.338, I70.339, I70.341, I70.342, I70.343, I70.344, I70.345, I70.348, I70.349, I70.35, I70.361, I70.362, I70.363, I70.368, I70.369, I70.391, I70.392, I70.393, I70.398, I70.399, I70.601, I70.602, I70.603, I70.608, I70.609, I70.611, I70.612, I70.613, I70.618, I70.619, I70.621, I70.622, I70.623, I70.628, I70.629, I70.631, I70.632, I70.633, I70.634, I70.635, I70.638, I70.639, I70.641, I70.642, I70.643, I70.644, I70.645, I70.648, I70.649, I70.65, I70.661, I70.662, I70.663, I70.668, I70.669, I70.691, I70.692, I70.693, I70.698, I70.699, I70.701, I70.702, I70.703, I70.708, I70.709, I70.711, I70.712, I70.713, I70.718, I70.719, I70.721, I70.722, I70.723, I70.728, I70.729, I70.731, I70.732, I70.733, I70.734, I70.735, I70.738, I70.739, I70.741, I70.742, I70.743, I70.744, I70.745, I70.748, I70.749, I70.75, I70.761, I70.762, I70.763, I70.768, I70.769, I70.791, I70.792, I70.793, I70.798, I70.799, I70.401, I70.402, I70.403, I70.408, I70.409, I70.411, I70.412, I70.413, I70.418, I70.419, I70.421, I70.422,

I70.423, I70.428, I70.429, I70.431, I70.432, I70.433, I70.434, I70.435, I70.438, I70.439, I70.441, I70.442, I70.443, I70.444, I70.445, I70.448, I70.449, I70.45, I70.461, I70.462, I70.463, I70.468, I70.469, I70.491, I70.492, I70.493, I70.498, I70.499, I70.501, I70.502, I70.503, I70.508, I70.509, I70.511, I70.512, I70.513, I70.518, I70.519, I70.521, I70.522, I70.523, I70.528, I70.529, I70.531, I70.532, I70.533, I70.534, I70.535, I70.538, I70.539, I70.541, I70.542, I70.543, I70.544, I70.545, I70.548, I70.549, I70.55, I70.561, I70.562, I70.563, I70.568, I70.569, I70.591, I70.592, I70.593, I70.598, I70.599, Z95.1, Z95.5, Z98.61

Current Procedural Terminology (CPT)*: 33140, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33530, 33533, 33534, 33535, 33536, 92980, 92981, 92982, 92984, 92995, 92996

CODES USED TO IDENTIFY ENCOUNTER TYPE:

OUTPATIENT SETTING

CPT: 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99341-99345, 99347-99350, 99384-99387, 99401-99404, 99411, 99412, 99420, 99429

UB-92 revenue: 051x, 0520-0523, 0526-0529, 057x-059x, 077x, 082x-085x, 088x, 0982, 0983

NONACUTE INPATIENT

CPT: 99304-99310, 99315, 99316, 99318, 99324-99328, 99334-99337

UB-92 revenue: 0118, 0128, 0138, 0148, 0158, 019x, 0524, 0525, 055x, 066x

ACUTE INPATIENT

CPT: 99221-99223, 99224-99226, 99231-99233, 99238, 99239, 99251-99255, 99291

UB-92 revenue: 010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x-022x, 072x, 080x, 0987

EMERGENCY DEPARTMENT

CPT: 99281-99285

UB-92 revenue: 045x, 0981

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The following are the statin medications by class for the denominator. The route of administration includes all oral formulations of the medications listed below.

STATIN MEDICATIONS:

HMG-COA reductase inhibitors:

atorvastatin
fluvastatin
lovastatin
pravastatin
rosuvastatin
simvastatin
pitavastatin

HMG-COA reductase inhibitors combinations:

amlodipine-atorvastatin
ezetimibe-simvastatin
ezetimibe-atorvastatin
niacin-lovastatin
niacin-simvastatin
sitagliptin-simvastatin

S.10. Denominator Exclusions (Brief narrative description of exclusions from the target population)

Not Applicable

S.11. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

Not Applicable

S.12. Stratification Details/Variables (All information required to stratify the measure results including the stratification variables, definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b)

Depending on the operational use of the measure, measure results may be stratified by:

- State
- Accountable Care Organizations (ACOs)
- Plan
- Physician Group
- Age- Divided into 6 categories: 18-24, 25-44, 45-64, 65-74, 75-84, and 85+ years of age
- Race/Ethnicity
- Dual Eligibility

S.13. Risk Adjustment Type (Select type. Provide specifications for risk stratification in S.12 and for statistical model in S.14-15)

No risk adjustment or risk stratification

If other:

S.14. Identify the statistical risk model method and variables (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development and testing should be addressed with measure testing under Scientific Acceptability)

Not Applicable

S.15. Detailed risk model specifications (must be in attached data dictionary/code list Excel or csv file. Also indicate if available at measure-specific URL identified in S.1.)

Note: Risk model details (including coefficients, equations, codes with descriptors, definitions), should be provided on a separate worksheet in the suggested format in the Excel or csv file with data dictionary/code lists at S.2b.

S.15a. Detailed risk model specifications (if not provided in excel or csv file at S.2b)

Not Applicable

S.16. Type of score:

Rate/proportion

If other:

S.17. 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)

Better quality = Higher score

S.18. Calculation Algorithm/Measure Logic (Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.)

Adherence to Statin Therapy for Individuals with CVD is calculated as follows:

Obtain Medicare administrative claims data and related files as described in detail in Section S.23 – S.24.

Denominator: Individuals at least 21 years of age and older as of the beginning of the measurement period with CVD and at least 2 prescription drug claims for a statin in the measurement period

Create Denominator:

1. Pull individuals who are 21 years of age or older as of the beginning of the measurement period.
2. Include individuals who were continuously enrolled in Part D coverage during the measurement period, with no more than a one-month gap in enrollment during the measurement period.
3. Include individuals who had no more than a one-month gap in Part A enrollment, no more than a one-month gap in Part B enrollment, and no more than 1 month of HMO enrollment during the current measurement period (fee-for-service [FFS] individuals only).
4. Of those individuals identified in Step 3, keep those who had:
At least 2 face-to-face encounters with a principal or secondary diagnosis of CVD with different dates of service in an outpatient setting or non-acute inpatient setting during the measurement period,

OR

At least 1 face-to-face encounter with a principal or secondary diagnosis of CVD in an acute inpatient setting or emergency department setting during the measurement period.

5. From the individuals identified in Step 4, extract Part D claims for a statin drug. Attach the generic name and the drug ID to the dataset.
6. Of the individuals identified in Step 5, exclude those who did not have at least 2 claims for a statin on different dates of service during the measurement period.

Numerator: Individuals with CVD who had at least two prescription drug claims for a statin and had a PDC of at least 0.8 during the measurement period

Create Numerator:

Of the individuals in the denominator, calculate the PDC for each individual according to the following methods:

1. Determine the individual's measurement period, defined as the number of days from the index prescription date through the end of the measurement period, or death, whichever comes first. Index date is the date of the first prescription in the measurement period.
2. Within the measurement period, count the days the individual was covered by at least one statin drug based on the prescription fill date and days of supply.
 - a. Pull Part D statin claims for individuals in the denominator. Attach the drug ID and the generic name to the dataset.
 - b. Sort and de-duplicate claims by beneficiary ID, service date, generic name, and descending days' supply. If prescriptions for the same drug (generic name) are dispensed on the same date of service for an individual, keep the dispensing with the largest days' supply.
 - c. Calculate the number of days covered by statin drug therapy per individual.
 - d. For prescriptions with a days' supply that extends beyond the end of the measurement period, count only the days for which the drug was available to the individual during the measurement period.
 - e. If prescriptions for the same drug (generic name) overlap, then adjust the prescription start date to be the day after the previous fill has ended.
 - f. If prescriptions for different drugs (different generic names) overlap, do not adjust the prescription start date.
3. Calculate the PDC for each individual. Divide the number of covered days found in Step 2 by the number of days in the individual's measurement period found in Step 1.

An example of SAS code for Steps 1-3 was adapted from PQA and is also available at the URL:
<http://www2.sas.com/proceedings/forum2007/043-2007.pdf>.

Using the individuals identified in the denominator, count the number of individuals with a calculated PDC of at least 0.8.

S.19. Calculation Algorithm/Measure Logic Diagram URL or Attachment (You also may provide a diagram of the Calculation Algorithm/Measure Logic described above at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)
No diagram provided

S.20. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF a PRO-PM, identify whether (and how) proxy responses are allowed.

Not applicable; this measure does not use a sample or survey.

S.21. Survey/Patient-reported data (If measure is based on a survey, provide instructions for conducting the survey and guidance on minimum response rate.)

IF a PRO-PM, specify calculation of response rates to be reported with performance measure results.

Not applicable; this measure does not use a sample or survey.

S.22. Missing data (specify how missing data are handled, e.g., imputation, delete case.)

Required for Composites and PRO-PMs.

If data are missing for days' supply for any included drug, the individual is excluded from measurement.

S.23. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.24.

Claims

S.24. Data Source or Collection Instrument (Identify the specific data source/data collection instrument e.g. name of database, clinical registry, collection instrument, etc.)

IF a PRO-PM, identify the specific PROM(s); and standard methods, modes, and languages of administration.

For measure calculation, the following Medicare files were required:

- Denominator tables
- Prescription drug benefit (Part D) coverage tables
- Beneficiary file
- Institutional claims (Part A)
- Non-institutional claims (Part B)—physician carrier/non-DME
- Prescription drug benefit (Part D) claims

For ACO attribution, the following were required:

- Denominator tables for Parts A and B enrollment
- Prescription drug benefit (Part D) coverage tables
- Beneficiary file
- Institutional claims (Part A)
- Non-institutional claims (Part B)—physician carrier/non-DME
- Prescription drug benefit (Part D) claims

For physician group attribution, the following were required:

- Non-institutional claims (Part B)—physician carrier/non-DME
- Denominator tables to determine individual enrollment
- Beneficiary file or coverage table to determine hospice benefit and Medicare as secondary payor status
- CMS physician and physician specialty tables
- National Plan & Provider Enumeration System (NPPES) database

S.25. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

No data collection instrument provided

S.26. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Clinician : [Group/Practice, Health Plan, Integrated Delivery System, Population : Regional and State](#)

S.27. Care Setting (Check *ONLY* the settings for which the measure is SPECIFIED AND TESTED)

[Outpatient Services](#)

If other:

S.28. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

[Not Applicable](#)

2a. Reliability – See attached Measure Testing Submission Form

2b. Validity – See attached Measure Testing Submission Form

[3_-_NQF_0543_Measure_Testing_Form-635502739182738473.docx](#)

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

[Coded by someone other than person obtaining original information \(e.g., DRG, ICD-9 codes on claims\)](#)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields? (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields)

[ALL data elements are in defined fields in electronic claims](#)

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources.

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL.

[No feasibility assessment](#) Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF a PRO-PM, consider implications for both individuals providing PROM data (patients, service recipients, respondents) and those whose performance is being measured.

[Testing demonstrated that the measure was feasible to specify and calculate using CMS administrative claims data. Data sources needed to implement the measure are readily available, accessible, and timely. The administrative claims data are used for payment of medical services and are routinely audited by Medicare.](#)

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

The administrative data (collected by CMS primarily for billing purposes) are used as the data source for this measure. Therefore, the cost of data collection is negligible.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Planned	Current Use (for current use provide URL)
	Quality Improvement (Internal to the specific organization) QRUR http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/2011-QRUR.html

4a.1. For each CURRENT use, checked above, provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included

Name of the Program: Quality and Resource Use Report (QRUR)

Sponsor: Centers for Medicare & Medicaid Services

Purpose: QRUR provides information on the quality of care and resource use for Medicare fee-for-service beneficiaries who the physician treated in the calendar year of the report. Specifically, NQF 0543 is one of the patient-centric quality measures included in the report to provide feedback to physicians on the quality of care for the calendar year.

Geographic Area: California, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, and Wisconsin

Number and Percentage of Accountable Entities: 15,034 physician were included in the measure analysis for 2011 (15.9% of the total population, N= 94,585). The average case size in the denominator was 53.7.

4a.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

Not Applicable

4a.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

The measure has been submitted through the Measures under Consideration process for the CMS ACO Shared Savings program.

4b. Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance

results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b.1. Progress on Improvement. (Not required for initial endorsement unless available.)

Performance results on this measure (current and over time) should be provided in 1b.2 and 1b.4. Discuss:

- Progress (trends in performance results, number and percentage of people receiving high-quality healthcare)
- Geographic area and number and percentage of accountable entities and patients included

The QRUR summary report for 2012 was not yet available at the time that this NQF submission form was prepared. Therefore, progress on improvement cannot be identified. Nevertheless, the 2011 QRUR, which conducted the measure analysis with the original specifications of NQF 0543, indicated that 11.8% of physicians (among those with a case size of at least 20) were statistically different from the mean (mean=63.3%, p-value <.05). The average measure reliability at the physician level was .296, and 50% of physicians have a reliability score above 0.7.

Centers for Medicare & Medicaid Services. [Disseminated December 2014.] Analysis of 2011 Physician Feedback Program Individual Reports. Retrieved from <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/PY2011-Individual-Report.pdf>

4b.2. If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

Not Applicable

4c. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4c.1. Were any unintended negative consequences to individuals or populations identified during testing; OR has evidence of unintended negative consequences to individuals or populations been reported since implementation? If so, identify the negative unintended consequences and describe how benefits outweigh them or actions taken to mitigate them.

No unintended negative consequences were identified in the 2011 QRUR.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

0066 : Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy - Diabetes or Left Ventricular Systolic Dysfunction (LVEF <40%)

0067 : Coronary Artery Disease (CAD): Antiplatelet Therapy

0070 : Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

0074 : Chronic Stable Coronary Artery Disease: Lipid Control

0075 : Ischemic Vascular Disease (IVD): Complete Lipid Profile and LDL-C Control <100 mg/dL

0076 : Optimal Vascular Care

0118 : Anti-Lipid Treatment Discharge

0541 : Proportion of Days Covered (PDC): 3 Rates by Therapeutic Category

0542 : Adherence to Chronic Medications

0545 : Adherence to Statins for Individuals with Diabetes Mellitus
0569 : ADHERENCE TO STATINS
0611 : Hyperlipidemia (Primary Prevention) - Lifestyle Changes and/or Lipid Lowering Therapy
0639 : Statin Prescribed at Discharge
1519 : Statin Therapy at Discharge after Lower Extremity Bypass (LEB)
1879 : Adherence to Antipsychotic Medications for Individuals with Schizophrenia
1880 : Adherence to Mood Stabilizers for Individuals with Bipolar I Disorder

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

None identified

5a. Harmonization

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications completely harmonized?

No

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

NQF 0543 is related to and completely harmonized with the four NQF-endorsed measures that use the PDC method of calculating adherence. These four measures (measure titles are provided in Section 5.1a above) include one NQF-endorsed measure by PQA (NQF 0541) and three NQF-endorsed measures by CMS (NQF 0542, 0545, and 1879). For the related measures that are not completely harmonized with NQF 0543, the following paragraphs identify differences between these measures and NQF 0543, rationale, impact on interpretability, and data collection burden. Chronic Stable Coronary Artery Disease Measures by American Medical Association-Physician Consortium for Performance Improvement (AMA-PCPI) - NQF 0543 has the same general target population (i.e., individuals with cardiovascular disease) as the four measures developed by the AMA-PCPI. The four AMA-PCPI measures (NQF 0066, 0067, 0070, and 0074) are related to, but are not completely harmonized with, NQF 0543. Differences between NQF 0543 and AMA-PCPI Chronic Stable Coronary Artery Disease Measures - Identification of Individuals with Clinical Disease: NQF 0543 uses an algorithm for identifying individuals with cardiovascular disease of atherosclerotic origin (i.e., coronary artery disease, cerebrovascular disease, and peripheral artery disease presumed to be of atherosclerotic origin), which entails using diagnosis codes and/or procedure codes to identify atherosclerotic cardiovascular disease within the inpatient or outpatient claims data. However, the AMA-PCPI Chronic Stable Coronary Artery Disease Measures use only diagnosis codes for coronary artery disease at an ambulatory visit. Both NQF 0543 and the AMA-PCPI Chronic Stable Coronary Artery Disease Measures identify patients within the a 12-month measurement period. Age of individuals in measure: NQF 0543 includes individuals who are at least 21 years of age, and older and the AMA-PCPI Chronic Stable Coronary Artery Disease Measures include individuals who are at least 18 years of age and older. Rationale: NQF 0543 and the AMA-PCPI Chronic Stable Coronary Artery Disease Measures both use a one-year time frame. The age range (i.e., >21 years of age) and the clinical conditions (i.e., atherosclerotic cardiovascular disease) of individuals included in NQF 0543 are consistent with the 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults (Stone et al., 2013), whereas the age range and clinical conditions used in the AMA-PCPI Measures (i.e., 18 years of age and older and coronary artery disease) may be consistent with other guidelines relevant to the topics of those measures. Impact on interpretability: NQF 0543 includes individuals with cerebrovascular disease, and peripheral artery disease, in addition to those with coronary artery disease, whereas the AMA-PCPI measures include only those identified as having coronary artery disease. In addition, NQF 0543 includes individuals identified on the basis of inpatient and outpatient diagnosis codes, whereas the AMA-PCPI measures include only those identified using outpatient claims. Therefore, NQF 0543 uses a broader definition of the eligible population than the AMA-PCPI measures. Data collection burden: The target population of NQF 0543 is identified using administrative/claims data, so the data collection burden is minimal. The AMA-PCPI Chronic Stable Coronary Artery Disease Measures use either administrative/claims data or electronic health record data, and therefore, may require more time and resources to calculate the measure. NQF 0075 Ischemic Vascular Disease (IVD): Complete Lipid Profile and LDL-C Control <100 mg/dL (National Committee for Quality Assurance) - NQF 0543 has the same general target population (i.e., individuals with cardiovascular disease) as this measure developed by the National Committee for Quality Assurance (NCQA). This measure is related to, but is not completely harmonized with, NQF 0543. Differences between NQF 0543 and NQF 0075: Identification of Individuals with Cardiovascular Disease: NQF 0543 uses the same algorithm for identifying individuals with cardiovascular disease as

NQF 0075, which entails using diagnosis codes and/or procedure codes to identify cardiovascular disease within the inpatient or outpatient claims data. However, NQF 0543 uses only claims for the 12-month measurement period, whereas NQF 0075 uses a look-back period of one year prior to the measurement period for diagnosis and procedure data. **Age of Individuals Included in the Measure:** NQF 0543 includes individuals who are at least 21 years of age and older as of the beginning of the measurement year, whereas NQF 0075 includes individuals who are 18-75 years as of December 31st of the measurement year. **Rationale:** NQF 0543 uses a one-year time frame, rather than two years for NQF 0075, which allows more individuals (i.e., those with one year of data) to be included. NQF 0543 includes individuals 21 years and older, rather than 18-75 years for NCQA's NQF 0075, to be consistent with the recommendations of the 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults (Stone et al., 2013). **Impact on interpretability:** NQF 0543 is easier to interpret than NQF 0075 because it is consistent with the latest ACC/AHA Cholesterol Treatment Guideline. **Data collection burden:** The target populations of NQF 0543 and NQF 0075 are identified using administrative claims or encounter data, so the data collection burden for the two measures should be similar. **NQF 0569 Adherence to Statins (Health Benchmark-IMS Health):** NQF 0543 and NQF 0569 address the same measure focus (i.e., adherence to statin therapy), but NQF 0569 has a different target population (i.e., diabetes, hyperlipidemia, and coronary artery disease). **Differences between NQF 0543 and NQF 0569:** NQF 0543 uses the proportion of days covered (PDC) methodology rather than the medication possession ratio (MPR). The PDC used in NQF 0543 provides a more conservative estimate of adherence when a patient might be switching among several medications for the same indication or using multiple medications within a single class (Nau, n.d.) than the MPR used by NQF 0569. The PDC provides a better estimate of adherence under these circumstances. NQF 0569 excludes "new users of a statin that started after the first three months of the measurement year." NQF 0543 covers the entire 12-month measurement period. The impact of the exclusion used in NQF 0569 would be to limit the measure to those who have at least 9 months of data. **Rationale:** NQF 0543 is intended as a statin adherence measure for all patients with cardiovascular disease of atherosclerotic origin, to be consistent with the 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults (Stone et al., 2013) recommendations for statin therapy. **Impact on interpretability:** NQF 0543 is easier to interpret than NQF 569 because it calculates adherence for all patients with cardiovascular disease of atherosclerotic origin, rather than restricting the denominator to those with cardiovascular disease and other indications. **Data collection burden:** Both measures are based on administrative claims data, so there should be little or no difference in data collection burden. **Citations for 5a.2 -** Nau, D. P. (n.d.). Proportion of days covered (PDC) as a preferred method of measuring medication adherence. Pharmacy Quality Alliance. Retrieved from <http://www.pqaalliance.org/images/uploads/files/PQA%20PDC%20vs%20%20MPR.pdf> Stone, N. J., Robinson, J., Lichtenstein, A. H., Merz, C. N. B., Blum, C. B., Eckel, R. H., . . . Wilson, P. W. F. (2013). 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Journal of the American College of Cardiology*. doi: 10.1161/01.cir.0000437738.63853.7a

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

None

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

No appendix Attachment:

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): Centers for Medicare & Medicaid Services

Co.2 Point of Contact: Sophia, Chan, Sophia.Chan@cms.hhs.gov, 410-786-5050-
Co.3 Measure Developer if different from Measure Steward: Centers for Medicare & Medicaid Services
Co.4 Point of Contact: Elizabeth, Ricksecker, Elizabeth.Ricksecker@cms.hhs.gov, 410-786-6723-

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

Original Technical Expert Panel (TEP) Members

Jill S. Borchert, Professor, Pharmacy Practice & PGY1 Residency Program Director, Midwestern University, Chicago College of Pharmacy

Anne Burns, Vice President, Professional Affairs, American Pharmacists Association

Jannet Carmichael, VISN 21 Pharmacy Executive, VA Sierra Pacific Network

Marshall H. Chin, Professor of Medicine, University of Chicago

Jay A. Gold, Senior Vice President and Medicare Chief Medical Officer, MetaStar, Inc.

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N. Lee Rucker, Senior Strategic Policy Advisor, AARP - Public Policy Institute

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The TEP evaluated proposed medication measures drafted by FMQAI in regard to the four primary measure evaluation criteria used in the NQF consensus endorsement process (importance, scientific acceptability, feasibility, and usability). The TEP discussed the strengths and weaknesses of the proposed measures and made recommendations regarding measure specifications, inclusion and exclusion criteria, and appropriate risk adjustment as applicable.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2009

Ad.3 Month and Year of most recent revision: 01, 2014

Ad.4 What is your frequency for review/update of this measure? Annually

Ad.5 When is the next scheduled review/update for this measure? 12, 2014

Ad.6 Copyright statement: Limited proprietary coding is contained in the measure specifications for user convenience. Use of these codes may require permission from the code owner or agreement to a license.

ICD-10 codes are copyright © World Health Organization (WHO), Fourth Edition, 2010.

Ad.7 Disclaimers: This performance measure does not establish a standard of medical care and has not been tested for all potential applications.

Ad.8 Additional Information/Comments: Not Applicable