

NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the [submitting standards web page](#).

NQF #: 0629	NQF Project: Population Health: Prevention Project
(for Endorsement Maintenance Review)	
Original Endorsement Date: Dec 04, 2009 Most Recent Endorsement Date: Dec 04, 2009	
BRIEF MEASURE INFORMATION	
De.1 Measure Title: Male Smokers or Family History of Abdominal Aortic Aneurysm (AAA) - Consider Screening for AAA	
Co.1.1 Measure Steward: ActiveHealth Management	
De.2 Brief Description of Measure: The percentage of men age 65-75 years with history of tobacco use or men age 60 yrs and older with a family history of abdominal aortic aneurysm who were screened for AAA	
2a1.1 Numerator Statement: Men who have had AAA screening.	
2a1.4 Denominator Statement: Men age 65-75 years with a history of tobacco use (current or ever) or Men age 60 and older with a family history of abdominal aortic aneurysm based on patient derived data or claims data	
Time Window: Anytime in the past	
2a1.8 Denominator Exclusions: There are no specific exclusions to this measure. General exclusions: • Evidence of metastatic disease or active treatment of malignancy (chemotherapy or radiation therapy) in the last 6 months; • Patients who have been in a skilled nursing facility in the last 3 months	
1.1 Measure Type: Process	
2a1. 25-26 Data Source: Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Pharmacy, Electronic Clinical Data : Registry, Patient Reported Data/Survey	
2a1.33 Level of Analysis: Clinician : Group/Practice, Clinician : Individual, Clinician : Team, Facility, Health Plan, Integrated Delivery System, Population : Community, Population : County or City, Population : National, Population : Regional, Population : State	
1.2-1.4 Is this measure paired with another measure? No	
De.3 If included in a composite, please identify the composite measure (title and NQF number if endorsed):	

STAFF NOTES (issues or questions regarding any criteria)
Comments on Conditions for Consideration:
Is the measure untested? Yes <input type="checkbox"/> No <input type="checkbox"/> If untested, explain how it meets criteria for consideration for time-limited endorsement:
1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (check De.5):
5. Similar/related endorsed or submitted measures (check 5.1):
Other Criteria:
Staff Reviewer Name(s):

1. IMPACT, OPPORTUNITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT

Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See [guidance on evidence](#).

Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria. (evaluation criteria)

1a. High Impact: H M L I

(The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.)

De.4 Subject/Topic Areas (Check all the areas that apply): [Prevention](#)

De.5 Cross Cutting Areas (Check all the areas that apply): [Population Health](#)

1a.1 Demonstrated High Impact Aspect of Healthcare: [Severity of illness](#)

1a.2 If "Other," please describe:

1a.3 Summary of Evidence of High Impact (Provide epidemiologic or resource use data):

Abdominal aortic aneurysms are found in 4% to 8% of older men and 0.5% to 1.5% of older women. Age, smoking, sex, and family history are the most significant AAA risk factors. Aortic aneurysms account for about 15,000 deaths in the United States annually; of these, 9,000 are AAA-related and the remainder are due to thoracic aortic aneurysms. Most AAA deaths occur in men 65 years of age and older

1a.4 Citations for Evidence of High Impact cited in 1a.3: • [ACCF/AHA/ACR/SCAI/SIR/SVM/SVN/SVS 2010 performance measures for adults with peripheral artery disease: a report of the American College of Cardiology Foundation/American Heart Association Task Force on performance measures, the American College of Radiology, the Society for Cardiac Angiography and Interventions, the Society for Interventional Radiology, the Society for Vascular Medicine, the Society for Vascular Nursing, and the Society for Vascular Surgery \(Writing Committee to Develop Clinical Performance Measures for Peripheral Artery Disease\). Circulation. 2010 Dec 14;122\(24\):2583-618](#)

• [ACC/AHA 2005 Practice Guidelines for the management of patients with peripheral arterial disease \(lower extremity, renal, mesenteric, and abdominal aortic\): a collaborative report from the American Association for Vascular Surgery/Society for Vascular Surgery, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine and Biology, Society of Interventional Radiology, and the ACC/AHA Task Force on Practice Guidelines \(Writing Committee to Develop Guidelines for the Management of Patients With Peripheral Arterial Disease\): endorsed by the American Association of Cardiovascular and Pulmonary Rehabilitation; National Heart, Lung, and Blood Institute; Society for Vascular Nursing; TransAtlantic Inter-Society Consensus; and Vascular Disease Foundation. Circulation. 2006 Mar 21;113\(11\):e463-654.](#)

• [Recommendations. U.S. Preventive Services Task Force](#)

<http://www.uspreventiveservicestaskforce.org/recommendations.htm>

• [Fleming C, Whitlock EP, Beil TL, et al. Screening for abdominal aortic aneurysm: a best-evidence systematic review for the U.S. Preventive Services Task Force. Ann Intern Med. 2005;142:203-11.](#)

• [Kent KC, Zwolak RM, Jaff MR, et al. Screening for abdominal aortic aneurysm: a consensus statement. J Vasc Surg. 2004;39:267-9](#)

1b. Opportunity for Improvement: H M L I

(There is a demonstrated performance gap - variability or overall less than optimal performance)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:

On the basis of our systematic review and meta-analyses, an invitation to attend AAA screening may reduce AAA-related mortality by 43% in men age 65 to 75 years. The Western Australia screening study also included patients 75 to 83 years of age. In a post hoc analysis, a significant reduction of AAA-related mortality from screening was seen in men 65 to 74 years of age but not in older men. The absolute risk reduction for AAA-related deaths over 4 to 5 years ranged from 3.6 per 10,000 in the Western Australia trial to 21 per 10,000 in the Chichester and Viborg County trials. It is important to note that these estimates pertain to screening in populations and not to screening for individuals.

After adjustment for other risk factors, a history of smoking is associated with a 5-fold increase in AAA risk (1). Using a model of AAA screening in 65- to 74-year-old men, we estimated that 89% of AAA-related deaths prevented would be attributable to

screening in 69% of those men with any history of smoking during their lifetime. Neither a current history of smoking nor consideration of other AAA risk factors appears to be more accurate than age, sex, and lifetime smoking history in selecting a high-risk screening population.

- Reference: Fleming C, Whitlock EP, Beil TL, et al. Screening for abdominal aortic aneurysm: a best-evidence systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2005;142:203–11.

1b.2 Summary of Data Demonstrating Performance Gap (*Variation or overall less than optimal performance across providers*): **[For Maintenance – Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.]**

By definition, an AAA is present when the infrarenal aortic diameter exceeds 3.0 cm.⁵ Large AAAs are associated with approximately 9,000 deaths annually in the United States.⁶ The prevalence of AAAs found in population-based ultrasonography screening studies from various countries is about 4 percent to 9 percent in men and 1 percent in women.⁷⁻¹² The prevalence of an AAA greater than 5.0 cm in men aged 50 to 79 is estimated to be 0.5 percent.¹³ Almost all deaths from ruptured AAAs occur in men older than 65; most AAA-related deaths occur in men younger than 80; and most AAA-related deaths in women occur when they are older than 80.^{14,15}

The USPSTF found good evidence that screening for AAA and surgical repair of large AAAs (5.5 cm or more) in men aged 65 to 75 who have ever smoked (current and former smokers) leads to decreased AAA-specific mortality. There is good evidence that abdominal ultrasonography, performed in a setting with adequate quality assurance (i.e., in an accredited facility with credentialed technologists), is an accurate screening test for AAA.

Based on our search for performance results on this measure, we found that there is a lack of descriptive statistics demonstrating a performance gap for AAA screening with ultrasound in male smokers. However, using our test data, we identified 3563 patients who qualified for AAA screening, out of a total population of nearly 2.5 million lives. Out of those identified for this measure in the test data, only 1774, or 49.8% were screened with appropriate testing. Looking at our total member population, 2753 were identified as being at risk for AAA and lacking evidence of screening with an ultrasound. Even after physicians were alerted to the gap in care, only 466, or 17% of members identified as at risk, received the appropriate screening.

1b.3 Citations for Data on Performance Gap: **[For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]**

Using our test data, we identified 3563 patients who qualified for AAA screening, out of a total population of nearly 2.5 million lives. Out of those identified for this measure, only 1774, or 49.8% were screened with appropriate testing. Looking at our total member population from January through December of 2010, 2753 people were identified as being at risk for AAA and lacking evidence of screening with an ultrasound. Even after physicians were alerted to the gap in care, only 466, or 17% of members identified as at risk, received the appropriate screening.

The USPSTF review identified four randomized controlled trials (RCTs) of screening for AAA; these RCTs predominantly screened white men aged 65 and older.^{2,3} A good-quality RCT of 67,800 white men aged 65 to 74 was conducted to evaluate screening for AAA.⁸ Screening was performed by ultrasonography and surgery in men with AAAs greater than 5.4 cm. The study showed AAA related-mortality was reduced by an average of 42 percent (95 percent CI, 22 percent-58 percent) in the screened population compared with the non-screened population; the absolute reduction in AAA-specific mortality was 0.14 percent (0.33 percent in the non-screened group and 0.19 percent in the screened group).

1b.4 Summary of Data on Disparities by Population Group: **[For Maintenance –Descriptive statistics for performance results for this measure by population group]**

The potential benefit of screening for AAA among women aged 65 to 75 is low because of the small number of AAA-related deaths in this population. The majority of deaths from AAA rupture occur in women aged 80 or older. Because there are many competing health risks at this age, any benefit of screening for AAA would be minimal. Individualization of care, however, is still required. For example, a clinician may choose to discuss screening in the unusual circumstance in which a healthy female smoker in her early 70s has a first-degree family history for AAA that required surgery.

The Society for Vascular Surgery and the Society for Vascular Medicine and Biology recommend screening all men aged 60 to 85 for AAA; women aged 60 to 85 with cardiovascular risk factors; and men and women aged 50 and older with a family history of AAA. These groups further recommend the following courses of action after screening: no further testing if aortic diameter is less than 3.0 cm; yearly ultrasonographic screening if aortic diameter is between 3.0 to 4.0 cm; ultrasonography every 6 months if aortic diameter is between 4.0 to 4.5 cm; and referral to a vascular specialist if aortic diameter is greater than 4.5 cm.³⁴

Reference: Reference: Fleming C, Whitlock EP, Beil TL, et al. Screening for abdominal aortic aneurysm: a best-evidence systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2005;142:203–11.
 Reference: Kent KC, Zwolak RM, Jaff MR, et al. Screening for abdominal aortic aneurysm: a consensus statement. *J Vasc Surg.* 2004;39:267–9

1b.5 Citations for Data on Disparities Cited in 1b.4: [*For Maintenance – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*]

Using our test data, we identified 3563 patients who qualified for AAA screening, out of a total population of nearly 2.5 million lives. Out of those identified for this measure, only 1774, or 49.8% were screened with appropriate testing. Looking at our total member population from January through December of 2010, 2753 people were identified as being at risk for AAA and lacking evidence of screening with an ultrasound. Even after physicians were alerted to the gap in care, only 466, or 17% of members identified as at risk, received the appropriate screening.

The USPSTF review identified four randomized controlled trials (RCTs) of screening for AAA; these RCTs predominantly screened white men aged 65 and older.^{2,3} A good-quality RCT of 67,800 white men aged 65 to 74 was conducted to evaluate screening for AAA.⁸ Screening was performed by ultrasonography and surgery in men with AAAs greater than 5.4 cm. The study showed AAA related-mortality was reduced by an average of 42 percent (95 percent CI, 22 percent-58 percent) in the screened population compared with the non-screened population; the absolute reduction in AAA-specific mortality was 0.14 percent (0.33 percent in the non-screened group and 0.19 percent in the screened group).

The Chichester trial included 9342 women age 65 to 80 years who were randomly assigned to either an invitation-to-screening group or a control group (Table 1) (20). Sixty-five percent of women attended screening, compared with 73% of men (P?< 0.001). The AAA prevalence in women was 1.3%, compared with 7.6% in men. At 5 years of follow-up, there were no differences between women invited for screening and the control group in either AAA-related mortality (OR, 1.0 [CI, 0.14 to 7.07]) or all-cause mortality (OR, 1.05 [CI, 0.92 to 1.19]). At 10 years, the incidence of AAA rupture was the same for women in the screening and control groups (9).

Reference: Reference: Fleming C, Whitlock EP, Beil TL, et al. Screening for abdominal aortic aneurysm: a best-evidence systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2005;142:203–11.

1c. Evidence (*Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.*)
 Is the measure focus a health outcome? Yes No **If not a health outcome, rate the body of evidence.**

Quantity: H M L I Quality: H M L I Consistency: H M L I

Quantity	Quality	Consistency	Does the measure pass subcriterion1c?
M-H	M-H	M-H	Yes <input type="checkbox"/>
L	M-H	M	Yes <input type="checkbox"/> IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No <input type="checkbox"/>
M-H	L	M-H	Yes <input type="checkbox"/> IF potential benefits to patients clearly outweigh potential harms: otherwise No <input type="checkbox"/>
L-M-H	L-M-H	L	No <input type="checkbox"/>

Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service

Does the measure pass subcriterion1c?
 Yes IF rationale supports relationship

1c.1 Structure-Process-Outcome Relationship (*Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome*):

The USPSTF review identified four randomized controlled trials (RCTs) of screening for AAA; these RCTs predominantly screened white men aged 65 and older.^{2,3} A good-quality RCT of 67,800 white men aged 65 to 74 was conducted to evaluate screening for AAA.⁸ Screening was performed by ultrasonography and surgery in men with AAAs greater than 5.4 cm. The study showed AAA

related-mortality was reduced by an average of 42 percent (95 percent CI, 22 percent-58 percent) in the screened population compared with the non-screened population; the absolute reduction in AAA-specific mortality was 0.14 percent (0.33 percent in the non-screened group and 0.19 percent in the screened group).

Two fair-quality studies, by Lee, et al.,⁷ and Soisalon-Soininen, et al.,¹⁵ addressed the cost-effectiveness of selective screening for patients with higher rupture risk. Lee, et al.⁷ examined the effects of age at initial screening and AAA prevalence at initial screening, which served as a proxy for specific risk factors: sex (7 percent males, 1 percent females, 4 percent females > age 60), circulatory disease (9-12 percent), smoking history (17 percent), or family history of AAA (19 percent). Soisalon-Soininen, et al.¹⁵ examined selective screening of male relatives > age 50 of AAA patients. Life-expectancy was modeled using all-cause mortality over a 17-year time horizon. Both studies compared targeted screening with no screening; neither compared routine, but systematic, population-based screening with targeted screening.

Lee, et al.⁷ found that screening males beginning at age 60 (vs age 70 at baseline) lowers the ICER ("incremental " cost-effectiveness ratio) from \$14,000/QALY to approximately \$5,000/QALY. In generating the latter result, Lee, et al.⁷ maintained the baseline AAA prevalence estimate of 7 percent. By age 83, the ICER rises to \$60,000/QALY. AAA prevalence at initial screening of 2 percent or higher generates an ICER of \$10,000/QALY or below—e.g., a 19-percent prevalence (proxy for family history of AAA) generates an ICER of \$8,460/QALY.

In Soisalon-Soininen, et al.¹⁵ screening male relatives > age 50 generates an ICER of \$8,900/LY; note that their denominator does not include quality adjustments, so their ICER in terms of QALYs would be somewhat higher than reported. However, also note that Soisalon-Soininen et al.'s cohort is younger than Lee, et al.'s (age 50 vs 70), and has a much lower AAA prevalence than Lee et al.'s (8.2 percent based on their own data vs 19 percent from the literature).

One might expect that using comparable ages would tend to widen the gap between the ICER estimates, but that using comparable prevalence values would tend to bring them closer together.

Reference: Meenan RT, et al. Cost-Effectiveness of Population-Based Screening for Abdominal Aortic Aneurysm. Agency for Healthcare Research and Quality. February 2005. (Avai lable on the AHRQ Web site at: <http://www.uspreventiveservicestaskforce.org/serfiles.htm>.)

1c.2-3 Type of Evidence (*Check all that apply*):

Systematic review of body of evidence (other than within guideline development)

1c.4 Directness of Evidence to the Specified Measure (*State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population*):

The USPSTF found good evidence that screening for AAA and surgical repair of large AAAs (5.5 cm or more) in men aged 65 to 75 who have ever smoked (current and former smokers) leads to decreased AAA-specific mortality. There is good evidence that abdominal ultrasonography, performed in a setting with adequate quality assurance (i.e., in an accredited facility with credentialed technologists), is an accurate screening test for AAA. There is also good evidence of important harms of screening and early treatment, including an increased number of surgeries with associated clinically-significant morbidity and mortality, and short-term psychological harms. Based on the moderate magnitude of net benefit, the USPSTF concluded that the benefits of screening for AAA in men aged 65 to 75 who have ever smoked outweigh the harms.

1c.5 Quantity of Studies in the Body of Evidence (*Total number of studies, not articles*):

1c.6 Quality of Body of Evidence (*Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*):

1c.7 Consistency of Results across Studies (*Summarize the consistency of the magnitude and direction of the effect*):

1c.8 Net Benefit (*Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms*):

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? **Yes**

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:

1c.11 System Used for Grading the Body of Evidence: USPSTF

1c.12 If other, identify and describe the grading scale with definitions:

1c.13 Grade Assigned to the Body of Evidence: • Rating: B Recommendation: The USPSTF recommends that clinicians provide [the service] to eligible patients. The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms

1c.14 Summary of Controversy/Contradictory Evidence: 1. The Society for Vascular Surgery and the Society for Vascular Medicine and Biology recommend screening all men aged 60 to 85 for AAA; women aged 60 to 85 with cardiovascular risk factors; and men and women aged 50 and older with a family history of AAA. These groups further recommend the following courses of action after screening: no further testing if aortic diameter is less than 3.0 cm; yearly ultrasonographic screening if aortic diameter is between 3.0 to 4.0 cm; ultrasonography every 6 months if aortic diameter is between 4.0 to 4.5 cm; and referral to a vascular specialist if aortic diameter is greater than 4.5 cm.³⁴

2. This was the most difficult measure to exclude. However, the PAD guidelines assigned this only a Class IIa designation. Because only Class I designations are considered for performance measures, screening for abdominal aortic aneurysm was excluded for women. However, the U.S. Preventive Task Force⁶⁰ and the Societies for Vascular Medicine and Surgery⁶¹ recommend screening for AAA in the following patient populations:

- Men age 60 years with a history of AAA in a parent or sibling.
- Men age 65 to 75 years who have ever smoked >100 cigarettes in their lifetime.

Screening this patient population has been shown to decrease aneurysm-related mortality.^{61–64} A meta-analysis of 4 large randomized prospective controlled trials⁶⁵ evaluated the midterm (3.5 to 5 years) and long-term (7 to 15 years) results as related to aneurysm-related mortality and total mortality. Heterogeneity between the studies was assessed by the chi-square test. In cases of heterogeneity, random effect models were used. The pooled midterm analysis demonstrated a reduction in AAA-related mortality (odds ratio [OR], 0.56, 95% confidence interval [CI], 0.44 to 0.72). Overall mortality was nonsignificantly reduced (OR, 0.94, 95% CI, 0.86 to 1.02). The long-term results also showed a reduction in AAA-related mortality (OR, 0.47, 95% CI, 0.25 to 0.90) and a significant reduction in overall mortality (OR, 0.94, 95% CI, 0.92 to 0.97). The conclusion of this meta-analysis was that population screening for AAA reduces AAA-related and overall mortality but local differences may influence the cost-effectiveness of screening.

Kim and associates⁶⁶ showed that the benefit derived at 4 years was maintained at 7 years of follow-up, with a relative risk reduction of aneurysm-related death of 47%. They also showed that there is a substantial cost-benefit to screening, which is estimated on the basis of AAA-related mortality as U.S. \$19,500 per life-year gained. The mortality curves diverge at a constant rate after 1 year, and the area between the curves is greater at years 5 to 7 than years 1 to 4. Thus, the cost per life-year gained decreases in the later years.⁶⁷ Therefore, when the PAD guideline is revised, if screening for AAA becomes a Class I recommendation, creation of an associated performance measure will be considered.

1c.15 Citations for Evidence other than Guidelines (*Guidelines addressed below*):

- Fleming C, Whitlock EP, Beil TL, et al. Screening for abdominal aortic aneurysm: a best-evidence systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2005;142:203–11.

1c.16 Quote verbatim, the specific guideline recommendation (Including guideline # and/or page #):

5.2.4.6 Screening high-Risk Population , pg e580

1. Class IIa

Men who are 65 to 75 years of age who have ever smoked should undergo a physical examination and 1- time ultrasound screening for detection of AAAs. (Level of Evidence B

1c.17 Clinical Practice Guideline Citation: ACC/AHA 2005 Practice Guidelines for the management of patients with peripheral arterial disease (lower extremity, renal, mesenteric, and abdominal aortic): a collaborative report from the American Association for

Vascular Surgery/Society for Vascular Surgery, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine and Biology, Society of Interventional Radiology, and the ACC/AHA Task Force on Practice Guidelines (Writing Committee to Develop Guidelines for the Management of Patients With Peripheral Arterial Disease): endorsed by the American Association of Cardiovascular and Pulmonary Rehabilitation; National Heart, Lung, and Blood Institute; Society for Vascular Nursing; TransAtlantic Inter-Society Consensus; and Vascular Disease Foundation. *Circulation*. 2006 Mar 21;113(11):e463-654.

1c.18 National Guideline Clearinghouse or other URL: <http://circ.ahajournals.org>

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? **Yes**

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: [ACC/AHA/ESC](#)

1c.21 System Used for Grading the Strength of Guideline Recommendation: [USPSTF](#)

1c.22 If other, identify and describe the grading scale with definitions:

1c.23 Grade Assigned to the Recommendation: **B**

1c.24 Rationale for Using this Guideline Over Others: [Incorporates all available evidence on Abdominal Aortic Aneurysm screening in high risk populations.](#)

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?

1c.25 Quantity: [Moderate](#) 1c.26 Quality: [High](#) 1c.27 Consistency: [High](#)

Was the threshold criterion, *Importance to Measure and Report*, met?

(1a & 1b must be rated moderate or high and 1c yes) Yes No

Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.

For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & 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. (**evaluation criteria**)

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See [guidance on measure testing](#).

S.1 Measure Web Page (In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained). Do you have a web page where current detailed specifications for this measure can be obtained? **Yes**

S.2 If yes, provide web page URL: <http://www.activehealth.net/nqf-measures.php>

2a. RELIABILITY. Precise Specifications and Reliability Testing: H M L I

2a1. Precise Measure Specifications. (The measure specifications precise and unambiguous.)

2a1.1 Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome):

[Men who have had AAA screening.](#)

2a1.2 Numerator Time Window (The time period in which the target process, condition, event, or outcome is eligible for inclusion):

Time Window: One time in the past

2a1.3 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, codes with descriptors, and/or specific data collection items/responses:

1. The Denominator is true
2. One of the following is correct:
 - a. Presence of Patient Data Confirming at least 1 PDD-Screening for AAA OBSER in the past
 - b. Presence of at least 1 AAA Repair Procedure in the past
 - c. Presence of at least 1 Abdominal Aortic Aneurysm Diagnosis in the past
 - d. Presence of At Least 1 Abdominal Imaging Procedure in the past

Note: A 3 month time window has been added to certain timeframes in order to account for the inherent delay in the acquisition of administrative claims data.

629 Numerator *AAA REPAIR 34800 EVASC RPR AAA W/AORTO-AORTIC TUBE PROSTH

629 Numerator *AAA REPAIR 34825 PLMT XTN PROSTH EVASC RPR ARYSM/DSJ 1ST VSL

629 Numerator *ABDOMINAL IMAGING 74175 CT ANGIOGRAPHY ABDOMEN W/CONTRAST/NONCONTRAST(Computed tomographic angiography, abdomen, with contrast material(s), including noncontrast images, if performed, and image postprocessing)

629 Numerator *ABDOMINAL IMAGING 76770 US RETROPERITONEAL R-T W/IMAGE COMPL (Ultrasound, retroperitoneal (eg, renal, aorta, nodes), real time with image documentation; complete)

629 Numerator *PDD- SCREENED FOR AAA AA12872.47601 Male smokers 65-75 y/o only are at risk for abdominal aortic aneurysm (AAA). Have you been screened w/ abdominal ultrasound? = Yes

629 Numerator *AAA REPAIR 0002T -01 Endovascular repair of infrarenal abdominal aortic aneurysm or dissection; aorto-uni-iliac or ao

629 Numerator *AAA REPAIR 0080T EVASC RPR AAA PSEUDOARYSM ABDL AORTA VISC RS&I

629 Numerator *AAA REPAIR 0081T PLMT VISC XTN PROSTH EVASC RPR AAA EA VISC RS&I

629 Numerator *ABDOMINAL AORTIC ANEURYSM 441.5 AORTIC ANEURYSM OF UNSPECIFIED SITE RUPTURED

629 Numerator *ABDOMINAL IMAGING 74181 MRI ABD C-MATRL(Magnetic resonance (eg, proton) imaging, abdomen; without contrast material(s))

629 Numerator *ABDOMINAL IMAGING 75635 CTA AA&BI ILIOFEM LXTR RS&I C-/C+ POST-PXESSING(Computed tomographic angiography, abdominal aorta and bilateral iliofemoral lower extremity runoff, with contrast material(s), including noncontrast images, if performed, and image postprocessing)

629 Numerator *ABDOMINAL IMAGING 76775 US RPR B-SCAN&/R-T IMG LMTD (Ultrasound, retroperitoneal (eg, renal, aorta, nodes), real time with image documentation; limited)

629 Numerator *ABDOMINAL IMAGING C8902 MR ANGIO WITHOUT CONTRST FOLLOWED W/CONTRST ABD(Magnetic resonance angiography without contrast followed by with contrast, abdomen)

629 Numerator *ABDOMINAL IMAGING 88.47 ARTERIOGRAPHY OF OTHER INTRA-ABDOMINAL ARTERIES (Arteriography of other intra-abdominal arteries)

629 Numerator *PDD- SCREENED FOR AAA HMT275.1 Have you been screened for or received treatment for abdominal aortic aneurysm (AAA)? = Yes

629 Numerator *AAA REPAIR 34803 EVASC RPR AAA W/MDLR BFRC PROSTH 2 LIMBS

629 Numerator *AAA REPAIR 34830 OPN RPR ARYSM RPR ARTL TRAUMA TUBE PROSTH

629 Numerator *AAA REPAIR 34831 OPN RPR ARYSM RPR ARTL TRMA AORTOBILIAC PROSTH

629 Numerator *AAA REPAIR 35103 DIR RPR ARYSM&GRF RPTD ARYSM ABDL AORTA ILIAC

629 Numerator *AAA REPAIR 35331 TEAEC +-PATCH GRF ABDL AORTA

629 Numerator *ABDOMINAL AORTIC ANEURYSM 441.1 THORACIC ANEURYSM, RUPTURED

629 Numerator *ABDOMINAL IMAGING 74150 CT ABD C-MATRL (Computed tomography, abdomen; without contrast material

- 629 Numerator *ABDOMINAL IMAGING 74183 MRI ABD C-/C+(Magnetic resonance (eg, proton) imaging, abdomen; without contrast material(s), followed by with contrast material(s) and further sequence)
- 629 Numerator *ABDOMINAL IMAGING 74185 MRA ABD C+-MATRL(Magnetic resonance angiography, abdomen, with or without contrast material(s))
- 629 Numerator *ABDOMINAL IMAGING 75600 AORTOGRAPY THRC W/O SRLOGRAPY RS&l(Aortography, thoracic, without serialography, radiological supervision and interpretation)
- 629 Numerator *ABDOMINAL IMAGING 76700 US ABDOMINAL R-T W/IMAGE DOCUMENTATION (Ultrasound, Complete abdominal, real time with image documentation)
- 629 Numerator *ABDOMINAL IMAGING 88.76 DIAGNOSTIC ULTRASOUND OF ABDOMEN&RETROPERITONEUM (Magnetic resonance angiography, abdomen, with or without contrast material(s))
- 629 Numerator *PDD- SCREENED FOR AAA PHR200001013.1 Have you ever been screened for an enlarged artery in your stomach area called an aortic aneurysm? = Yes
- 629 Numerator *AAA REPAIR 34826 PLMT XTN PROSTH EVASC RPR ARYSM/DSJ EA VSL
- 629 Numerator *AAA REPAIR 35102 DIR RPR ARYSM&GRF INSJ AB DL AORTA ILIAC VSL
- 629 Numerator *AAA REPAIR M0301 FABRIC WRAPPING OF ABDOMINAL ANEURYSM
- 629 Numerator *AAA REPAIR 0079T PLMT VISC XTN PROSTH EVASC RPR AAA EA VISC
- 629 Numerator *ABDOMINAL AORTIC ANEURYSM 441. AORTIC ANEURYSM*
- 629 Numerator *ABDOMINAL AORTIC ANEURYSM 441.7 THORACOABD ANEURYSM WITHOUT MENTION RUPTURE
- 629 Numerator *ABDOMINAL AORTIC ANEURYSM 447.73 THORACOABDOMINAL AORTIC ECTASIA
- 629 Numerator *ABDOMINAL IMAGING 74170 CT ABD C-/C+(Computed tomography, abdomen; without contrast material, followed by contrast material(s) and further sections)
- 629 Numerator *ABDOMINAL IMAGING 75605 AORTOGRAPY THRC SRLOGRAPY RS&l(Aortography, thoracic, by serialography, radiological supervision and interpretation)
- 629 Numerator *ABDOMINAL IMAGING 88.01 COMPUTERIZED AXIAL TOMOGRAPHY OF ABDOMEN(Computerized axial tomography of abdomen)
- 629 Numerator *AAA REPAIR 34804 EVASC RPR AAA W/UNIBDY BFRC PROSTH
- 629 Numerator *AAA REPAIR 34832 OPN RPR ARYSM RPR ARTL TRMA AORTO-BIFEM PROSTH
- 629 Numerator *AAA REPAIR 35092 DIR RPR ARYSM&GRF RPTD ARYSM AB DL AORTA VISC VSL
- 629 Numerator *AAA REPAIR 0078T EVASC RPR AAA PSEUDOARYSM AB DL AORTA VISC
- 629 Numerator *AAA REPAIR 33877 RPR THORACOAAA W/GRF +-CARD BYP
- 629 Numerator *ABDOMINAL AORTIC ANEURYSM 441.03 DISSECTING AORTIC ANEURYSM THORACOABDOMINAL
- 629 Numerator *ABDOMINAL AORTIC ANEURYSM 441.9 AORTIC ANEUR UNSPEC SITE WITHOUT MENTION RUPTURE
- 629 Numerator *ABDOMINAL AORTIC ANEURYSM 447.72 ABDOMINAL AORTIC ECTASIA
- 629 Numerator *ABDOMINAL IMAGING 74182 MRI ABD C+ MATRL(Magnetic resonance angiography without contrast, abdomen)
- 629 Numerator *ABDOMINAL IMAGING C8901 MR ANGIOGRAPHY WITHOUT CONTRAST ABDOMEN (Magnetic resonance angiography without contrast, abdomen)
- 629 Numerator *ABDOMINAL IMAGING 74177 CT ABD & PELVIS W/CONTRAST (Computed tomography, abdomen and pelvis; with contrast material(s))
- 629 Numerator *ABDOMINAL IMAGING 74178 CT ABD & PELVIS W/O CONTRST 1+ BODY REGNS (Computed tomography, abdomen and pelvis; without contrast material in one or both body regions, followed by contrast material(s) and further sections in one or both body regions)
- 629 Numerator *PDD- SCREENED FOR AAA AA14857.55826 MALES OVER 60 ONLY: Have you ever been screened for AAA? = Yes
- 629 Numerator *AAA REPAIR 0001T ENDOVSC REP INFRAENL AAA MODULR BIFURCAT PROSTH
- 629 Numerator *AAA REPAIR 34802 EVASC RPR AAA W/MDLR BFRC PROSTH 1 LIMB

629 Numerator *AAA REPAIR 34833 ILIAC ART EXPOS W/CRTJ CONDUIT UNI
 629 Numerator *AAA REPAIR 34834 BRACH ART EXPOS DPLMNT AORTIC/ILIAC PROSTH UNI
 629 Numerator *AAA REPAIR 75953 PLMT XTN PROSTH EVASC RPR INFRARNL RS&I
 629 Numerator *ABDOMINAL AORTIC ANEURYSM 441.02 DISSECTING AORTIC ANEURYSM ABDOMINAL
 629 Numerator *ABDOMINAL IMAGING 74160 CT ABD C+ MATRL (Computed tomography, abdomen; with contrast material(s))

629 Numerator *ABDOMINAL IMAGING G0389 US B-SCAN &/OR REAL TIME W/IMAG DOC; AAA SCREEN(Ultrasound B-scan and/or real time with image documentation; for abdominal aortic aneurysm (AAA) screening)

629 Numerator *ABDOMINAL IMAGING 74176 CT ABD & PELVIS W/O CONTRAST (Computed tomography, abdomen and pelvis; without contrast material)

629 Numerator *PDD- SCREENED FOR AAA ATV12872.47601 Male smokers 65-75 y/o only are at risk for abdominal aortic aneurysm (AAA). Have you been screened w/ abdominal ultrasound? = Yes

629 Numerator *AAA REPAIR 34805 EVASC RPR AAA AORTO-UNIILIAC/AORTO-UNIFEM PROSTH

629 Numerator *AAA REPAIR 35081 DIR RPR ARYSM&GRF INSJ AB DL AORTA

629 Numerator *AAA REPAIR 35082 DIR RPR ARYSM&GRF INSJ RPTD ARYSM AB DL AORTA

629 Numerator *ABDOMINAL AORTIC ANEURYSM 441.4 ABDOMINAL ANEURYSM WITHOUT MENTION OF RUPTURE

629 Numerator *ABDOMINAL AORTIC ANEURYSM 441 AORTIC ANEURYSM AND DISSECTION

629 Numerator *ABDOMINAL IMAGING 75630 AORTOGRAPY AB DL BI ILIOFEM LXTR CATH RS&I (Aortography, abdominal plus bilateral iliofemoral lower extremity, catheter, by serialography, radiological supervision and interpretation)

2a1.4 Denominator Statement (Brief, narrative description of the target population being measured):

Men age 65-75 years with a history of tobacco use (current or ever) or Men age 60 and older with a family history of abdominal aortic aneurysm based on patient derived data or claims data

Time Window: Anytime in the past

2a1.5 Target Population Category (Check all the populations for which the measure is specified and tested if any):

2a1.6 Denominator Time Window (The time period in which cases are eligible for inclusion):

Anytime in the past

2a1.7 Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):

One of the following:

- A. All of the following expressions are correct:
 - 1. Patient age >= 60 years and patient gender male
 - 2. Presence of patient data confirming at least 1 PDD- FHx AAA in the past 12 months
- B. All of the following expressions are correct:
 - 1. Patient Age between 65-75 Years and patient gender male
 - 2. One of the following is correct:
 - a. Presence of at least 2 Smoking-Current and Past diagnosis in the past
 - b. Presence of at least 1 Smoking Cessation Procedure in the past
 - c. Presence of at least 1 Refill Smoking Cessation drug in the past
 - d. Presence of Patient Data Confirming at least 1 PDD-Smoker (past and current) in the past

One of the following:

- A. All of the following expressions are correct:
 - 1. Patient age >= 60 years and patient gender male
 - 2. Presence of patient data confirming at least 1 PDD- FHx AAA in the past 12 months
- B. All of the following expressions are correct:
 - 1. Patient Age between 65-75 Years and patient gender male
 - 2. One of the following is correct:
 - a. Presence of at least 2 Smoking-Current and Past diagnosis in the past
 - b. Presence of at least 1 Smoking Cessation Procedure in the past

- c. Presence of at least 1 Refill Smoking Cessation drug in the past
- d. Presence of Patient Data Confirming at least 1 PDD-Smoker (past and current) in the past

2a1.8 Denominator Exclusions (Brief narrative description of exclusions from the target population):

There are no specific exclusions to this measure.

General exclusions:

- Evidence of metastatic disease or active treatment of malignancy (chemotherapy or radiation therapy) in the last 6 months;
- Patients who have been in a skilled nursing facility in the last 3 months

2a1.9 Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):

See above.

2a1.10 Stratification Details/Variables (All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses):

See above.

2a1.11 Risk Adjustment Type (Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13): No risk adjustment or risk stratification 2a1.12 If "Other," please describe:

2a1.13 Statistical Risk Model and Variables (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.):

No risk adjustment necessary.

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

2a1.17-18. Type of Score: Rate/proportion

2a1.19 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

2a1.20 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.):

PERFORMANCE MEASURE RULE:

Male Smokers or Family History of Abdominal Aortic Aneurysm (AAA) - Consider Screening for AAA

Denominator:

One of the following:

A. All of the following expressions are correct:

1. Patient age \geq 60 years and patient gender male
2. Presence of patient data confirming at least 1 PDD- FHx AAA in the past 12 months

B. All of the following are correct:

1. Patient Age between 65-75 Years And Patient Gender Male
2. One of the Following is correct:
 - a. Presence of At Least 2 SMOKING-CURRENT AND PAST diagnosis anytime in the past
 - b. Presence of At Least 1 SMOKING CESSATION Procedure anytime In the past
 - c. Presence of At Least 1 Refill SMOKING CESSATION drug anytime In the past
 - d. Presence of Patient Data Confirming At Least 1 PDD- SMOKER (PAST AND CURRENT) anytime in the past

Numerator:

All of the following expressions are correct:

1. The Denominator is True
2. One of the Following is correct:
 - A. Presence of Patient Data Confirming At Least 1 PDD- SCREENING FOR AAA OBSER anytime in the past
 - B. Presence of At Least 1 AAA REPAIR Procedure anytime In the past
 - C. Presence of At Least 1 ABDOMINAL AORTIC ANEURYSM Diagnosis anytime in the past
 - D. Presence of At Least 1 ABDOMINAL IMAGING Procedure anytime In the past

Note: A 3 month time window has been added to certain timeframes in order to account for the inherent delay in the acquisition of administrative claims data.

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:

2a1.24 **Sampling (Survey) Methodology.** If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):

Measure is not based on a sample.

2a1.25 **Data Source** (Check all the sources for which the measure is specified and tested). If other, please describe:

Administrative claims, Electronic Clinical Data, Electronic Clinical Data : Electronic Health Record, Electronic Clinical Data : Imaging/Diagnostic Study, Electronic Clinical Data : Pharmacy, Electronic Clinical Data : Registry, Patient Reported Data/Survey

2a1.26 **Data Source/Data Collection Instrument** (Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.): Data are collected from a number of electronic sources, e.g., health plans, pharmacy-based management systems, electronic health records, patient health records, etc.

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment:

2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:

Attachment

NQF Measure 629 codes.docx

2a1.33 **Level of Analysis** (Check the levels of analysis for which the measure is specified and tested): Clinician : Group/Practice, Clinician : Individual, Clinician : Team, Facility, Health Plan, Integrated Delivery System, Population : Community, Population : County or City, Population : National, Population : Regional, Population : State

2a1.34-35 **Care Setting** (Check all the settings for which the measure is specified and tested): Ambulatory Care : Clinic/Urgent Care, Ambulatory Care : Clinician Office, Hospital/Acute Care Facility, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility

2a2. **Reliability Testing.** (Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability.)

2a2.1 **Data/Sample** (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

All the data for the measures are obtained from electronic sources. Based on the client, we take in electronic data from health plans, pharmacy-based management systems, laboratory systems, personal health records, health risk assessments, and electronic health records. In addition, we can take in data from care management systems. All data feeds are electronic and do not

require manual medical chart abstraction.

We have over 21 million patient records across our book of business. The average age of the population is 35 and 51.9% of the population is female. Currently we use a database of approximately over 2 million patient records pulled from multiple populations for testing purposes.

Our testing procedure includes testing the rules on the database of approximately 2 million patient records. We typically review the results for reliability, i.e., did we find the same people on multiple runs and validity, i.e., did we find the appropriate people in the denominator and numerator

2a2.2 Analytic Method (*Describe method of reliability testing & rationale*):

All of our quality measures are electronic and all the data used to support the measures are electronic. In addition, we receive the data by electronic feeds. We have internal processes to ensure that we receive valid codes and where appropriate the associated values. Our analytic process includes testing a new rule or algorithm on our test database of 2 million patient records, so that we can be sure of the reliability of the code. At the end of the test, we randomly select patients who are either in the numerator, or in the denominator but not the numerator, to ensure that they met the requirements of the rule. As a part of our reliability testing, we check to ensure we have found the correct people in the denominator or the numerator, across multiple rules with similar definitions. To ensure accuracy, we check a subset of the people who were not in the numerator to ensure that we were accurate in not counting them in the numerator. If we find errors at any stage of the reliability testing, e.g., similar denominators that had significant differences in counts, different compliance rates for similar populations; we update the rules and retest.

2a2.3 Testing Results (*Reliability statistics, assessment of adequacy in the context of norms for the test conducted*):

The measure algorithms and code sets are all electronic. Once we complete testing the rules and correcting any errors, the rules are deployed in a production environment for our clients. At that point, the rules are considered reliable, i.e., if the rules are run on the same data set we expect to find the same people on a consistent basis.

2b. VALIDITY. Validity, Testing, including all Threats to Validity: H M L I

2b1.1 Describe how the measure specifications (*measure focus, target population, and exclusions*) **are consistent with the evidence cited in support of the measure focus** (*criterion 1c*) **and identify any differences from the evidence:**

2b2. Validity Testing. (*Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.*)

2b2.1 Data/Sample (*Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*):

The data for the measure are obtained from electronic sources. Based on the client, we take in electronic data from health plans, pharmacy-based management systems, laboratory systems, personal health records, health risk assessments, and electronic health records. In addition, we can take in data from care management systems. All data feeds are electronic and do not require manual medical chart abstraction.

2b2.2 Analytic Method (*Describe method of validity testing and rationale; if face validity, describe systematic assessment*):

All of our quality measures are electronic and all the data used to support the measures are electronic. In addition, we receive the data by electronic feeds. We have internal processes to ensure that we receive valid codes and where appropriate the associated values. Currently we use a database of approximately 2 million patient records for testing purposes. Our analytic process includes testing a new rule or algorithm on the standard data set so that we can be sure of the reliability of the code. At the end of the test, we randomly select patients who are either in the numerator, or in the denominator but not the numerator, to ensure that they met the requirements of the rule. As a part of our validity testing, we check to ensure we have found the correct people in the denominator or the numerator. To ensure accuracy, we check a subset of the people who were not in the numerator to ensure that we were accurate in not counting them in the numerator. If we find errors at any stage of the reliability testing, e.g., similar denominators that had differences in counts, compliance rates for similar populations that differ, then we update the rules and retest.

Further, to ensure that we obtain valid results once the measures are deployed, when we run the measure for a client we evaluate the results to ensure they are consistent with what we have found in the past for the client and across our book of business.

2b2.3 Testing Results (*Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity,*

describe results of systematic assessment):

The algorithms and code sets used for the measures are all electronic. Once we test the rules, and correct any errors, the rules are deployed in a production environment for our clients. At that point, the rule is considered reliable, that is we are finding the appropriate people in the denominator and numerator.

Using our test data, the compliance rate of the measure was 49.8% (denominator: 3563). In addition, we tested client data (for baseline purposes) and found a compliance rate of 34% (population 319434, denominator 233).

POTENTIAL THREATS TO VALIDITY. (*All potential threats to validity were appropriately tested with adequate results.*)

2b3. Measure Exclusions. (*Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.*)

2b3.1 Data/Sample for analysis of exclusions (*Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

There are no specific exclusions to this measure. For all of our rules, we apply general exclusions. In particular, we exclude people with a diagnosis of metastatic cancer or cancer treatment in the 6 month prior to the measurement date. In addition, we exclude patients who were in a skilled nursing facility 3 months before the measurement date.

2b3.2 Analytic Method (*Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference):*

There are no exclusions.

2b3.3 Results (*Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):*

There are no exclusions.

2b4. Risk Adjustment Strategy. (*For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.*)

2b4.1 Data/Sample (*Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

We do not apply risk adjustment to our rules.

2b4.2 Analytic Method (*Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables):*

We do not apply risk adjustment to our rules

2b4.3 Testing Results (*Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata):*

We do not apply risk adjustment to our rules.

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: To satisfy the ability to apply evidence-based risk stratification protocols, we would have to collect electronic data to support the stratification, systematically; and often these data are not readily captured using standard electronic feeds. Other potential risk factors, e.g. race, gender, age, and socioeconomic status, relate to disparities in care, and except for age would be difficult to capture. In addition, risk stratification for a process measure might not be applicable
We anticipate that once electronic health records and clinical data become more prevalent and robust, we will be able to capture these additional data for routine risk adjustment

2b5. Identification of Meaningful Differences in Performance. (*The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.*)

2b5.1 Data/Sample (*Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

Our ability to analyze measures across different populations is limited by the characteristics of a specific client population. Since the

rules are electronic, they are applied consistently, independent of the population characteristics. For example running this measure on a young population, may result in a lower denominator and compliance rate, compared to evaluating the measure across an older population.

2b5.2 Analytic Method (Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance):

[See comments above](#)

2b5.3 Results (Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance):

[See comments above](#)

2b6. Comparability of Multiple Data Sources/Methods. (If specified for more than one data source, the various approaches result in comparable scores.)

2b6.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

We receive electronic data from multiple sources – health plan, electronic health record, personal health record, etc. Independent of the sources, all the available data about a patient are aggregated into a single patient record for use in performance measurement. Therefore, for an individual patient the record will include claims data, clinical data from an electronic health record, or a self-reported data from a patient health record. Based on this, we do not typically conduct analyses based on disparate sources of data. Instead, the rules contain redundancies to accommodate the different sources of data or the absence of specific data based on the source

2b6.2 Analytic Method (Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure):

[See comments above](#)

2b6.3 Testing Results (Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted):

[See comments above](#)

2c. Disparities in Care: H M L I NA (If applicable, the measure specifications allow identification of disparities.)

2c.1 If measure is stratified for disparities, provide stratified results (Scores by stratified categories/cohorts): [We do not stratify our measures for disparities.](#)

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:

To stratify based on disparities, would require that we receive electronic data in our standard feeds that we do not currently receive, e.g., race, ethnicity, socioeconomic status. We anticipate that once electronic health records and clinical data become more prevalent and robust, we will be able to capture these additional data for routine use including stratification disparities

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met? (Reliability and Validity must be rated moderate or high) Yes No

Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the

measure and are likely to find them useful for decision making. (**evaluation criteria**)

C.1 Intended Purpose/ Use (Check all the purposes and/or uses for which the measure is intended): **Public Reporting, Quality Improvement (Internal to the specific organization)**

3.1 Current Use (Check all that apply; for any that are checked, provide the specific program information in the following questions):

3a. Usefulness for Public Reporting: H M L I
 (The measure is meaningful, understandable and useful for public reporting.)

3a.1. Use in Public Reporting - disclosure of performance results to the public at large (If used in a public reporting program, provide name of program(s), locations, Web page URL(s)). If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: [**For Maintenance** – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.]

Traditionally, we have reported our measures to clients, who then publish the results publicly. We are in the process of working with clients who are part of a number of initiatives including patient-centered medical homes and accountable care organizations. We anticipate that with these new initiatives, that we will deploy our quality measures, the results of which should be part of the public reporting and quality initiative programs.

3a.2. Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results:

3.2 Use for other Accountability Functions (payment, certification, accreditation). If used in a public accountability program, provide name of program(s), locations, Web page URL(s): Traditionally, we have reported our measures to clients, who then publish the results publicly. We are in the process of working with clients who are a part of a number of initiative including patient-centered medical homes and accountable care organizations. We anticipate that with these new initiatives, that we will deploy our quality measures, the results of which should be part of the public reporting and quality initiative programs

3b. Usefulness for Quality Improvement: H M L I
 (The measure is meaningful, understandable and useful for quality improvement.)

3b.1. Use in QI. If used in quality improvement program, provide name of program(s), locations, Web page URL(s): [**For Maintenance** – If not used for QI, indicate the reasons and describe progress toward using performance results for improvement].

3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement. If usefulness was demonstrated (e.g., QI initiative), describe the data, method and results:

Overall, to what extent was the criterion, Usability, met? H M L I
 Provide rationale based on specific subcriteria:

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (**evaluation criteria**)

4a. Data Generated as a Byproduct of Care Processes: H M L I

4a.1-2 How are the data elements needed to compute measure scores generated? (Check all that apply).

Data used in the measure are:

generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Other

personal health record, disease management system

4b. Electronic Sources: H M L I

4b.1 Are the data elements needed for the measure as specified available electronically (*Elements that are needed to compute measure scores are in defined, computer-readable fields*): Yes

4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources:

4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H M L I

4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:

We use a combination of data sources to mitigate the risk of inaccuracies or errors. We recognize that generally, electronic data have inherent errors and inaccuracies related to incorrect coding, or missing data, which can result in less specificity in the definition of the denominator and /or the numerator. To minimize these errors and inaccuracies, we use clinically enriched data (laboratory results, medication lists) to augment the data. In addition, where possible, we corroborate the data, for example if we receive an ICD-9 code for diabetes from claims, we also build include in the rule the requirement for diabetic medications. We have a mechanism in place to solicit feedback from providers via a feedback form, if they detect errors with the measure.

We do not anticipate significant unintended consequences from the implementation of the measure. Our measures are all developed from evidence-based literature or from clinical practice guidelines and are designed to encourage appropriate care of the patient.

4d. Data Collection Strategy/Implementation: H M L I

A.2 Please check if either of the following apply (*regarding proprietary measures*): Proprietary measure

4d.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 (*e.g., fees for use of proprietary measures*):

Generally, we have learned that we have to be flexible to take in data from all possible sources. We have also heard from providers, that they prefer that the rules err on the side of specificity, e.g., lessen the risk of false positives, that is, identifying the wrong patient for the denominator and that they want a mechanism to provide feedback

Overall, to what extent was the criterion, *Feasibility*, met? H M L I

Provide rationale based on specific subcriteria:

OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes No

Rationale:

If the Committee votes No, STOP.

If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND 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 before a final recommendation is made.

5.1 If there are related measures (*either same measure focus or target population*) or competing measures (*both the same measure focus and same target population*), list the NQF # and title of all related and/or competing measures:

5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?

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

5b. Competing Measure(s)

5b.1 If this measure has 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):
[This measure is not similar to other measures already endorsed by NQF.](#)

CONTACT INFORMATION

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Co.3 Measure Developer if different from Measure Steward: [ActiveHealth Management, 1333 Broadway, New York, New York, 10018](#)

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Co.5 Submitter: [Bani, Vir, MD, bvir@activehealth.net, 212-621-8200-, ActiveHealth Management](#)

Co.6 Additional organizations that sponsored/participated in measure development:

Co.7 Public Contact: [Bani, Vir, MD, bvir@activehealth.net, 212-621-8200-, ActiveHealth Management](#)

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development

Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward:

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.3 Year the measure was first released: [2005](#)

Ad.4 Month and Year of most recent revision: [12, 2010](#)

Ad.5 What is your frequency for review/update of this measure? [Every 2 years](#)

Ad.6 When is the next scheduled review/update for this measure? [10, 2013](#)

Ad.7 Copyright statement: [This information, including any attachments hereto, is the sole, exclusive, proprietary and confidential property of ActiveHealth Management, Inc., and is for the exclusive use of The National Quality Forum. Any use, copying, disclosure, dissemination or distribution by anyone other than the National Quality Forum is strictly prohibited.](#)

Ad.8 Disclaimers:

Ad.9 Additional Information/Comments:

Date of Submission (MM/DD/YY): [07/15/2011](#)