



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 #: 0417

De.2. Measure Title: Diabetic Foot & Ankle Care, Peripheral Neuropathy – Neurological Evaluation

Co.1.1. Measure Steward: American Podiatric Medical Association

De.3. Brief Description of Measure: Percentage of patients aged 18 years and older with a diagnosis of diabetes mellitus who had a neurological examination of their lower extremities within 12 months

1b.1. Developer Rationale: People with diabetes rarely have their feet examined on a regular basis. Despite efforts with quality measures, performance improvement programs, etc. The occurrence of yearly foot examinations remains consistently below 60% in most studies.

Most cases of lower extremity limb loss in the United States occur among people with diabetes who have a diabetic foot ulcer (DFU). These DFUs and the associated limb loss that may occur lead to excess healthcare costs and have a large negative impact on mobility, psychosocial well-being, and quality of life. The strategies for DFU prevention and management are evolving, but the implementation of these prevention and management strategies remains challenging. Barriers to implementation include poor access to primary medical care; patient beliefs and lack of adherence to medical advice; delays in DFU recognition; limited healthcare resources and practice heterogeneity of specialists.

The primary risk factor for diabetic ulcerations is loss of protective sensation (peripheral neuropathy). A yearly neurological examination of the lower extremity for a person with diabetes is essential. Risk classification based on neurologic findings and an appropriate treatment plan based on risk category can lead to a significant decrease in ulcerations and amputations. Diabetes and subsequent foot complications affect incredibly high numbers of people. The cost in both money and quality of life for the person with diabetes who develops an ulceration that leads to an amputation is staggering. The five year survival rate for a person with diabetes that undergoes an amputation is less than many forms of cancer.

S.4. Numerator Statement: Patients who had a lower extremity neurological exam performed at least once within 12 months

Definition:

Lower Extremity Neurological Exam – Consists of a documented evaluation of motor and sensory abilities and should include: 10-g monofilament plus testing any one of the following: vibration using 128-Hz tuning fork, pinprick sensation, ankle reflexes, or vibration perception threshold), however the clinician should perform all necessary tests to make the proper evaluation.

Numerator Quality-Data Coding Options for Reporting Satisfactorily:

Lower Extremity Neurological Exam Performed

G8404: Lower extremity neurological exam performed and documented

OR

Lower Extremity Neurological Exam not Performed for Documented Reasons

G8406: Clinician documented that patient was not an eligible candidate for lower extremity neurological exam measure

OR

Lower Extremity Neurological Exam not Performed

G8405: Lower extremity neurological exam not performed

S.7. Denominator Statement: All patients aged 18 years and older with a diagnosis of diabetes mellitus

S.10. Denominator Exclusions: Clinician documented that patient was not an eligible candidate for lower extremity neurological exam measure, for example patient bilateral amputee, patient has condition that would not allow them to accurately respond to a neurological exam (dementia, Alzheimer's, etc.), patient has previously documented diabetic peripheral neuropathy with loss of protective sensation.

De.1. Measure Type: Process

S.23. Data Source: [Administrative claims, Electronic Clinical Data : Electronic Health Record, Paper Medical Records](#)

S.26. Level of Analysis: [Clinician : Individual](#)

IF Endorsement Maintenance – Original Endorsement Date: [Jul 31, 2008](#) Most Recent Endorsement Date: [Dec 30, 2014](#)

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?

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

[Template_MeasSubm_Evidence_2013-08-20_6.6.14_submission.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)

People with diabetes rarely have their feet examined on a regular basis. Despite efforts with quality measures, performance improvement programs, etc. The occurrence of yearly foot examinations remains consistently below 60% in most studies. Most cases of lower extremity limb loss in the United States occur among people with diabetes who have a diabetic foot ulcer (DFU). These DFUs and the associated limb loss that may occur lead to excess healthcare costs and have a large negative impact on mobility, psychosocial well-being, and quality of life. The strategies for DFU prevention and management are evolving, but the implementation of these prevention and management strategies remains challenging. Barriers to implementation include poor access to primary medical care; patient beliefs and lack of adherence to medical advice; delays in DFU recognition; limited healthcare resources and practice heterogeneity of specialists.

The primary risk factor for diabetic ulcerations is loss of protective sensation (peripheral neuropathy). A yearly neurological examination of the lower extremity for a person with diabetes is essential. Risk classification based on neurologic findings and an appropriate treatment plan based on risk category can lead to a significant decrease in ulcerations and amputations. Diabetes and subsequent foot complications affect incredibly high numbers of people. The cost in both money and quality of life for the person with diabetes who develops an ulceration that leads to an amputation is staggering. The five year survival rate for a person with diabetes that undergoes an amputation is less than many forms of cancer.

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.

[2012 Physician Quality Reporting System Reporting Experience and Trends:](#)

[The Five Most Frequently Reported Individual Measures, by Specialty, for the Physician Quality Reporting System \(2012\):](#)

[Podiatrist](#)

[126](#)

[163](#)

[127](#)

[124](#)

[226](#)

Appendix 65:

Eligible Professionals: 323,038

Eligible Professionals that reported >1 valid QDC (measure 126)= 4,477

% of eligible professionals that reported >1 valid QDC (measure 126)= 1.4%

Average reporting rate per Eligible Professional = 43.6%

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.

See chart appended at end of document.

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.

Not available.

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.

While a gap in care for the specific components of diabetic foot examination, the lack of a foot examination is documented. The 2012 document produced by the AMA and NCQA noted that “just 55% of people with diabetes obtain annual foot examinations.” They further note that “racial and ethnic disparities persist as well. African Americans and Hispanics are significantly more likely to die of diabetes-related complications than Caucasians, while Native Americans and other vulnerable populations suffer under a disproportionate burden of diabetes-related morbidity and mortality.”

This most certainly reflect a lack of diabetic foot examinations in these minority groups, while not specifically demonstrating a lack of a specific lower extremity neurological examination.

Data from the CDC also demonstrates disparities in foot examinations without noting the specific components:

The Centers for Disease Control and Prevention examined the proportion of diabetic adults (over age 18) that received a foot exam in a given year. This data was categorized based on race/ethnicity, age, sex, and education level. In 2010, Hispanics had the lowest percentage of foot exams (59%) in comparison to Whites (71%) and Blacks (77%) (CDC, 2012). In the same year, smaller disparities were seen according to age. Nearly 75% of all adults with diabetes between ages 65-74 received a foot exam, about 73% of adults between ages 45-64 and 71.5% of adults over age 75 (CDC, 2012). There were not significant disparities by gender: In 2010, 72.3% of males and 70.7% of females received foot exams (CDC, 2012). Adults with an education greater than high school received foot exams at 70% while adults with only a high school education received foot exams at 67.8%; this gap widens for adults that achieved less than a high school education with only 59.1% receiving foot exams (CDC, 2012).

Centers for Disease Control and Prevention (CDC). 2012. CDC's Diabetes Program-Data and Trends-Prevalence of Diabetes-Percent of Foot Exam in the Last Year for Adults Aged ≥18 Years, by Race/Ethnicity. Retrieved from <http://www.cdc.gov/diabetes/statistics/preventive/tNewFtChkRace.htm>.

Centers for Disease Control and Prevention (CDC). 2012. CDC's Diabetes Program-Data and Trends-Prevalence of Diabetes-Percent of Foot Exam in the Last Year for Adults Aged ≥18 Years, by Age. Retrieved from <http://www.cdc.gov/diabetes/statistics/preventive/tNewFtChkAgeTot.htm>.

Centers for Disease Control and Prevention (CDC). 2012. CDC's Diabetes Program-Data and Trends-Prevalence of Diabetes-Percent of Foot Exam in the Last Year for Adults Aged ≥18 Years, by Sex. Retrieved from <http://www.cdc.gov/diabetes/statistics/preventive/tNewFtChkSex.htm>.

Centers for Disease Control and Prevention (CDC). 2012. CDC's Diabetes Program-Data and Trends-Prevalence of Diabetes-Percent of Foot Exam in the Last Year for Adults Aged ≥18 Years, by Education. Retrieved from <http://www.cdc.gov/diabetes/statistics/preventive/tNewFtChkEduc.htm>.

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](#)

1c.2. If Other:

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

List citations in 1c.4.

[Diabetic Foot: Facts and Figures](#)

[Diabetes affects 26 million people in the US and more than 366 million people worldwide.](#)

[Diabetesatlas.org/American Diabetes Association](#)

[The top 10 diabetes nations](#)

[International Diabetes Federation / Diabetesatlas.org](#)

[Diabetes kills more people annually than breast cancer and AIDS combined.](#)

[American Diabetes Association, 2009](#)

[80% of people with diabetes are from low and middle income nations](#)

[International Diabetes Federation, 2012](#)

[The number of people with diabetes is increasing in every single nation](#)

[International Diabetes Federation/World Health Org 2012](#)

[Half of people with diabetes don't know they have it.](#)

[American Diabetes Association / International Diabetes Federation, 2012](#)

[Quiet. Slow. Deadly. Expensive: Chronic Diseases Account for 75% of our Healthcare Costs.](#)

[CDC](#)

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[Seconds Count: Every 7 seconds someone dies from diabetes. Every 20 seconds someone is amputated.](#)

[International Diabetes Federation / Diabetesatlas.org](#)

Armstrong, et al, Diabetes Care 2013

The cost of diabetic foot ulcers is greater than that of the five most costly forms of cancer
Barshes, et al, 2013

Diabetic Foot Ulcer patients are twice as costly to US Medicare as those with diabetes alone
Rice, et al, ISPOR, 2013

Inpatient care constitutes nearly two thirds of insurance costs for diabetic foot ulcers
Rice, et al, ISPOR, 2013

The estimated annual US Burden of Diabetic Foot Ulcers is at least \$15 Billion
Rice, et al, ISPOR, 2013

By 2030, at least 550 million people will have diabetes- approximately 10% of the world's adult population.

International Diabetes Federation (IWGDF), 2011

There are now approximately 79M people with pre-diabetes in the USA
That is the equivalent of the total population of 30 states.
American Diabetes Association, 2012
2010 United States Census

The population of diabetes in the USA is greater than the population of the nation's 10 largest cities.
American Diabetes Association, 2012
2010 United States Census

The population of Diabetes in Arizona (home of SALSA) would make it the fourth largest city in the state.
American Diabetes Association, 2012
2010 United States Census

60-70% of those with diabetes will develop peripheral neuropathy, or lose sensation in their feet.

Dyck et al. Diabetic Neuropathy 1999

More than 90% of people with diabetic peripheral neuropathy are unaware they have it.

Bongaerts, et al, Diabetes Care, 2013

Up to 25% of those with diabetes will develop a foot ulcer.

Singh, Armstrong, Lipsky. J Amer Med Assoc 2005

The yearly incidence of diabetic foot ulcers ranges from 2% to 32%, depending on ADA risk classification

Boulton, Armstrong, et al, Diabetes Care 2008

Lavery, et al, Diabetes Care 2008

Sibbald, et al, Adv Skin Wound Care, 2012

More than half of all foot ulcers (wounds) will become infected, requiring hospitalization and 20% of infections result in amputation.

Lavery, Armstrong, et al. Diabetes Care 2006

Diabetes contributes to approximately 80% of the 120,000 nontraumatic amputations performed yearly in the United States.

Armstrong et al. Amer Fam Phys 1998

"Every 20 seconds, somewhere in the world, a limb is lost as a consequence of diabetes"

DFCon11, Bakker (after Boulton), DFCon.com

Boulton, The Lancet (cover), Nov. 2005

After a major amputation, 50% of people will have their other limb amputated within 2 years.

Goldner. Diabetes 1960

Armstrong, et al, J Amer Podiatr Med Assn, 1997

More than half of people with osteomyelitis of the heel will undergo high level amputation

Faglia, et al, Foot Ankle Int, 2013

The relative 5-year mortality rate after limb amputation is 68%. When compared with cancer – it is second only to lung cancer (86%). (Colorectal cancer 39%, Breast cancer 23%, Hodgkin's disease 18%, Prostate cancer 8%)

Armstrong, et al, International Wound Journal, 2007

Amer Cancer Society; Facts & Figures 2000

Singh, Armstrong, Lipsky et al. J Amer Med Assoc 2005

Icks, et al, Diabetes Care, 2011

Median time to healing for diabetic foot wounds: 147,188, and 237 days for toe, midfoot and heel ulcers.
Pickwell, et al, Diabetes Metab Res Rev, 2013

People with a history of a diabetic foot ulcer have a 40% greater 10 year mortality than people with diabetes alone.

Iversen, et al, Diabetes Care, 2009

Every 30 minutes a limb is lost due to a landmine.

Every 30 seconds, a limb is lost due to diabetes.

Bharara, Mills, Suresh, Armstrong, Int Wound J, 2009

Having a wound immediately doubles one's chances of dying at 10 years compared with someone without diabetes.

Iversen, et al, Diabetes Care 2009

One third of patients seeking care for ischemic wounds die unhealed

Elgzyri, et al, Eur J Vasc Endovasc Surg, 2013

For people on dialysis receiving an amputation, 2 year mortality is 74%

Ndip, et al, 2012, Diabetes

Diabetic foot ulcers double mortality and heart attack risk while increasing risk for stroke by 40%

Brownrigg, et al, Diabetologia, 2012

Chronic wounds affect some 8 million Americans each year. That's one wound every 3.8 seconds in the USA, alone.

Harsha, 2008 and Tomic-Canic 2010

Each \$1 invested in care by a podiatrist for people with diabetes results in \$27 to \$51 of healthcare savings.

JAPMA, 101(2), 2011

Podiatry care not only reduces amputation risk, but also dramatically impacts rate of hospitalization and reulceration

Gibson, et al, Int Wound Journal, 2013

Podiatric medical care in people with history of diabetic foot ulcer can reduce high level amputation from between 65% and 80%

Gibson, et al, Int Wound Journal, 2013

Instituting a structured diabetic foot program can yield a 75% reduction in amputation rates and a near four-fold reduction in inpatient mortality

Weck, et al, Cardiovascular Diabetology, 2013

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

Included in 1c.3.

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.)

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):

Endocrine : Diabetes, Prevention

De.6. Cross Cutting Areas (check all the areas that apply):

Prevention

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.)

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the 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)

Attachment Attachment: [APMA_0417.pdf](#)

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: [NQF_0417_codes-635284935772565257.xlsx](#)

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

Addition of ICD-10 codes in anticipation of ICD-10 implementation on 10/1/2014.
e-measure specification.

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.

Patients who had a lower extremity neurological exam performed at least once within 12 months

Definition:

Lower Extremity Neurological Exam – Consists of a documented evaluation of motor and sensory abilities and should include: 10-g monofilament plus testing any one of the following: vibration using 128-Hz tuning fork, pinprick sensation, ankle reflexes, or vibration perception threshold), however the clinician should perform all necessary tests to make the proper evaluation.

Numerator Quality-Data Coding Options for Reporting Satisfactorily:

Lower Extremity Neurological Exam Performed

G8404: Lower extremity neurological exam performed and documented

OR

Lower Extremity Neurological Exam not Performed for Documented Reasons

G8406: Clinician documented that patient was not an eligible candidate for lower extremity neurological exam measure

OR

Lower Extremity Neurological Exam not Performed

G8405: Lower extremity neurological exam not performed

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.)

January 1 – December 31, 20xx, i.e. 12 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.

GXXXX- Lower extremity neurological exam performed, GXXXX Lower Extremity Neurological Exam not Performed for Documented Reasons, OR GXXXX Lower Extremity Neurological Exam not performed

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

All patients aged 18 years and older with a diagnosis of diabetes mellitus

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

Populations at Risk, Senior Care

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)

Denominator Criteria (Eligible Cases):

Patients aged = 18 years on date of encounter

AND

Diagnosis for diabetes (ICD-9-CM) [for use 1/1/2014-9/30/2014]: 250.00, 250.01, 250.02, 250.03, 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33, 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.70, 250.71, 250.72, 250.73, 250.80, 250.81, 250.82, 250.83, 250.90, 250.91, 250.92, 250.93

Diagnosis for diabetes (ICD-10-CM) [for use 10/01/2014-12/31/2014]: E10.10, E10.11, E10.21, E10.22, E10.29, E10.311, E10.319, E10.321, E10.329, E10.331, E10.339, E10.341, E10.349, E10.351, E10.359, E10.36, E10.39, E10.40, E10.41, E10.42, E10.43, E10.44, E10.49, E10.51, E10.52, E10.59, E10.610, E10.618, E10.620, E10.621, E10.622, E10.628, E10.630, E10.638, E10.641, E10.649, E10.65, E10.69, E10.8, E10.9, E11.00, E11.01, E11.21, E11.22, E11.29, E11.311, E11.319, E11.321, E11.329, E11.331, E11.339, E11.341, E11.349, E11.351, E11.359, E11.36, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.49, E11.51, E11.52, E11.59, E11.610, E11.618, E11.620, E11.621, E11.622, E11.628, E11.630, E11.638, E11.641, E11.649, E11.65, E11.69, E11.8, E11.9, E13.00, E13.01, E13.10, E13.11, E13.21, E13.22, E13.29, E13.311, E13.319, E13.321, E13.329, E13.331, E13.339, E13.341, E13.349, E13.351, E13.359, E13.36, E13.39, E13.40, E13.41, E13.42, E13.43, E13.44, E13.49, E13.51, E13.52, E13.59, E13.610, E13.618, E13.620, E13.621, E13.622, E13.628, E13.630, E13.638, E13.641, E13.649, E13.65, E13.69, E13.8, E13.9

AND

Patient encounter during the reporting period (CPT): 11042, 11043, 11044, 11055, 11056, 11057, 11719, 11720, 11721, 11730, 11740, 97001, 97002, 97597, 97598, 97802, 97803, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

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

Clinician documented that patient was not an eligible candidate for lower extremity neurological exam measure, for example patient bilateral amputee, patient has condition that would not allow them to accurately respond to a neurological exam (dementia, Alzheimer's, etc.), patient has previously documented diabetic peripheral neuropathy with loss of protective sensation.

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)

896.2

Amputation, foot, bilateral, partial or complete, traumatic, not complicated

896.3

Amputation, foot, bilateral, partial or complete, traumatic, complicated

897.0

Amputation, below knee, unilateral, traumatic, not complicated

897.1

Amputation, below knee, unilateral, traumatic, complicated

897.2

Amputation, at or above knee, unilateral, traumatic, not complicated

897.3

Amputation, at or above knee, unilateral, traumatic, complicated

897.6

Amputation, bilateral, any level, traumatic, not complicated

897.7

Amputation, bilateral, any level, traumatic, complicated

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)

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)

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)

S.16. Type of score:

Ratio

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.)

A (# of patients meeting numerator criteria)/

PD (# of patients in denominator) – C (# of patients with valid denominator exclusions)

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)

Available in attached appendix at A.1

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.

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.

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

Required for Composites and PRO-PMs.

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

If other, please describe in S.24.

Administrative claims, Electronic Clinical Data : Electronic Health Record, Paper Medical Records

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.

DATA COLLECTION TOOL

To assist with the data collection at each physician practice site, an On-Site Adjudication Tool (OSAT) was developed by Telligen. The tool was customized to capture the data elements for Evaluation of Footwear and Neurological Evaluation performance measures. In addition to assisting the auditor with verification of age, diabetes mellitus, and history of bilateral foot/leg amputation, the tool provided the ability to capture location of documentation for each individual data element. Upon completion of abstraction at each on-site visit, the auditors performed back-up onto an encrypted flash drive. At the completion of the audit, the case results were exported from the tool and analyzed. No patient or physician identifiable information was captured. The tool provided the ability to enter data for a maximum of 100 cases per practice site.

OSAT was developed using the Product Designer Module. The module is used to compose abstraction resource files which define abstraction components. The module allows for unique project creation, while tailoring features to each customer's needs.

Questions, answers, and measures are added as defined by the project. In addition, the tool is sophisticated enough to allow for the creation of skip, edit, and measure logic, based on the needs of the project. Skip logic defines rules for enabling questions based on defined patterns. Edit logic defines validations to be performed on answers provided by users of the tool. During the design phase, functionality tests were conducted with ongoing abstractor recommendations being incorporated into the application. Once the design functionality was complete, an OSAT build was created and tested to ensure readiness for field use.

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)

Available in attached appendix at A.1

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

Clinician : Individual

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

Ambulatory Care : Clinician Office/Clinic

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.)

2a. Reliability – See attached Measure Testing Submission Form

2b. Validity – See attached Measure Testing Submission Form

Measure_testing_template_00417-635229590556845655-635284935784109405.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.

Generated or collected by and used by healthcare personnel during the provision of care (e.g., blood pressure, lab value, diagnosis, depression score), Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

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 health records (EHRs)

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.

Attachment Attachment: [Measure_Testing_Final_ReportI_APMA.pdf](#)

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.

Collecting the data from an electronic health record requires the cooperation of the EHR vendor to incorporate the appropriate data fields from the e-measure specifications of the specific measure. While this was a challenge prior to 2014, with the certification requirements for 2014 ONC Certification of an EHR, vendors are better equipped to implement the e-specifications of the measure. This measure has been submitted as part of the US Wound Registries Qualified Clinical Data Registry (www.uswoundregistry.com) and a better evaluation of the feasibility should be obtained when the submission of these measure to the registry can be evaluated.

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*).

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)
	Payment Program 2014 CMS PQRS www.cms.gov/PQRS US Wound Registry QCDR www.uswoundregistry.com Professional Certification or Recognition Program ABPS MOC Program www.abps.org

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

PHYSICIAN QUALITY REPORTING SYSTEM: This measure is used in the Physician Quality Reporting System (PQRS) which is a reporting program that uses a combination of incentive payments and payment adjustments to promote reporting of quality information by eligible professionals (EPs). PQRS is a voluntary individual reporting program that provides an incentive payment to identified eligible professionals who satisfactorily report data on quality measures for covered Physician Fee Schedule (PFS) services furnished to Medicare Part B beneficiaries (including Railroad Retirement Board and Medicare Secondary Payer). Medicare Part C–Medicare Advantage beneficiaries are not included in claims-based reporting of individual measures or measures groups.

United States Wound Registry:

The US Wound Registry is an approved Qualified Clinical Data Registry by CMS for 2014. This program allows both PQRS approved and other measures to be submitted to meet 2014 PQRS requirements. Providers report directly from their EHR to the USWR QCDR so the measures must be implemented in an e-format. NQF measure for Neurological Exam (0417) is included in this QCDR.

The American Board of Podiatric Surgery participates in the maintenance of certification program for CMS. This is an incentive payment program that is linked to PQRS. ABPS includes NQF measure 0417 as part of the MOC program.

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?)

N/A

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.)

N/A

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

There is noted an increase in % utilization of this measure in PQRS data from 2008-2011 showing that there has been some improvement in performing this measure. However, there is a large % of patients that still do not get a diabetic foot exam annually.

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.

N/A

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.

There are no unintended consequences identified or reported for this measure.

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.

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

0056 : Diabetes: Foot Exam

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

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.

Age range of 18-75 years in measure 0056 limits data collection and leaves an vulnerable population unaddressed.

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.)

The most significant factor related to the development of a diabetic foot ulceration is the loss of protective sensation related to peripheral neuropathy. Visual inspection and vascular evaluation have shown little predictive value related to development of diabetic foot ulcerations. Measure 0056 only requires a sensory exam by monofilament, yet the ADA 2014 Standards of Care under Foot Exam specify the following:

"For all patients with diabetes, perform an annual comprehensive foot examination to identify risk factors predictive of ulcers and amputations. The foot examination should include inspection, assessment of foot pulses, and testing for loss of protective sensation (LOPS) (10-g monofilament plus testing any one of the following: vibration using 128-Hz tuning fork, pinprick sensation, ankle reflexes, or vibration perception threshold)."

The above description for a neurological examination is exactly reflected in measure 0417. With the discrepancy in age and the difference in the exams required, measure 0417 should be maintained. Ideally, a composite measure that incorporates all components of an annual diabetic foot exam should be implemented. APMA is working on the development of such a measure and it is included as part of the USWR QCDR for 2014. This should help with testing of this composite measure as well as developing measure specifications. Until such a measure is approved, it would make sense to maintain both measure 0056 and 0417. Also, measure 0056 previously in PQRS was described as doing one of the three components to report (either visual inspection, sensory exam or pulse evaluation) so any data reported prior to 2014 would not necessarily include a neurological examination. The measure has changed for PQRS 2014 to now require all three elements, but prior to 2014 could be achieved with just visual inspection--a very low level requirement with questionable value.

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.

[Attachment](#) **Attachment:** [Appendix_final.pdf](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): [American Podiatric Medical Association](#)

Co.2 Point of Contact: [James, Christina, jrchristina@apma.org, 301-581-9265-](#)

Co.3 Measure Developer if different from Measure Steward: [American Podiatric Medical Association](#)

Co.4 Point of Contact: [James, Christina, jrchristina@apma.org, 301-581-9265-](#)

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.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: [2008](#)

Ad.3 Month and Year of most recent revision: [05, 2013](#)

Ad.4 What is your frequency for review/update of this measure? [Yearly](#)

Ad.5 When is the next scheduled review/update for this measure? [01, 2015](#)

Ad.6 Copyright statement:

Ad.7 Disclaimers:

Ad.8 Additional Information/Comments: