



American Podiatric Medical Association

2012 Measure Testing Project

Diabetic Foot & Ankle Care: Ulcer Prevention – Evaluation of Footwear Peripheral Neuropathy – Neurological Evaluation

Data Sample – the patient data undergoing manual inspection for this testing project came from patient encounters that occurred during the following time periods:

January 1 – December 31, 2011 (2 sites)

October 1, 2011 – May 1, 2012 (1 site)

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Table of Contents

EXECUTIVE SUMMARY	5
INTRODUCTION.....	7
OBJECTIVES	7
METHODS	8
RECRUITMENT OF PILOT TEST SITE	9
SITE CHARACTERISTICS	9
SECURITY AND PERSONAL HEALTH INFORMATION (PHI)	10
DATA COLLECTION TOOL	10
PRE-VISIT PREPARATION.....	10
EVALUATION OF FOOTWEAR AND NEUROPATHY EVALUATION SITE SAMPLING STRATEGY	11
ON-SITE MEASURE TESTING	12
RESULTS OF RELIABILITY TESTING	12
RELIABILITY & PERFORMANCE RATES TESTING RESULTS: EVALUATION OF FOOTWEAR MEASURE.....	13
RELIABILITY & PERFORMANCE RATES TESTING RESULTS: NEUROLOGICAL EVALUATION MEASURE.....	14
PERFORMANCE MEASURE RESULTS	15
MEASURE TESTING DATA ELEMENT TABLE.....	15
DATA ELEMENT LOCATION TABLE	15
EVALUATION OF FOOTWEAR/NEUROLOGICAL EVALUATION TESTING FINDINGS ..	17
EHR CODING SETS AND DATA SOURCES	19
PHYSICIAN QUALITY REPORTING SYSTEM (PQRS) RELIABILITY	20
RECOMMENDATIONS	21
APPENDICES	22
Appendix I – Diabetes Mellitus: Foot and Ankle Care Measures	22
Appendix II – Podiatry Diabetic Foot and Ankle Measures Feasibility and Reliability Testing Protocol.....	23
Appendix III – Checklist for Feasibility Testing/Results	25
Appendix IV – Diabetes Mellitus: Foot and Ankle Care Data Elements/Data Abstraction Definitions	26
Appendix V – Podiatry (APMA) Data Collection Paper Tool	30
Appendix VI – Evaluation of Footwear Element Table	32

Appendix VII – Neurological Evaluation Element Table	33
Appendix VIII – Eligible Criteria Elements - Percentage of Time Where Data Was Found by the Abstractors	35
Appendix IX – Evaluation of Footwear - Percentage of Time Where Data Was Found by the Abstractors	36
Appendix X – Neurological Evaluation - Percentage of Time Where Data Was Found by the Abstractors	36

EXECUTIVE SUMMARY

Measures Tested

Measures from the Diabetes Mellitus: Foot and Ankle Care measure set tested in this project:

- Ulcer Prevention - Evaluation of Footwear
- Peripheral Neuropathy - Neurological Evaluation

Methods

Three physician office sites participated in this measure testing project. Originally, four sites were identified and selected by Dr. James R. Christina, Director of Scientific Affairs for the American Podiatric Medical Association (APMA). One site withdrew due to time constraints resulting from a change in practice ownership.

All three physician office sites participating in this measure testing project represented urban settings on the East Coast. The practices each had two or more physicians, with physicians actively involved with APMA.

Two trained data abstractors performed on-site chart reviews the weeks of October 1 and November 5, 2012. Testing was performed on paper medical records at one physician office site and in the electronic health record (EHR) environment for two physician office sites. The case samples for chart reviews were randomly selected from eligible patients seen at two of the test sites between January 1 and December 31, 2011. Due to a change in the billing system, one test site requested a change in the chart sample timeframe to October 1, 2011 through May 1, 2012 to allow for accurate identification of eligible patients.

Testing Performed and Results

Feasibility: Test site personnel completed a data collection questionnaire to provide information about the presence and location of each data element comprising the two measures within the medical record to assess the feasibility of data capture, calculation and reporting of the performance measures in a timely manner and at reasonable cost. **Results:** This test revealed that it was feasible to implement these performance measures at the test sites with some EHR modifications.

Two physician office sites reported that “Footwear Evaluation not Performed for Documented Reasons” was not in a discrete field and therefore could not be codified. The abstractors found no instances where documentation was present reporting that the patient refused an evaluation of footwear, but text fields were available in the progress notes of the EHR if an instance required documentation. A physician at one of the two sites reported that the measure can be calculated despite the lack of a discrete field as there would be no patient refusals for performance of an “ulcer examination.”

Footwear intervention (findings/counseling) was reported by one site as not being in a discrete field or able to be codified. Components of the footwear evaluation, including findings, education and counseling, were typically found in the visit notes. Since the EHR does not have a discrete

field to capture footwear intervention information, an EHR report will show non-compliance until EHR modifications can be implemented.

Similar to the footwear measure, two physician office sites reported that “Patient Reason for Not Performing Neurological Evaluation” was not in a discrete field and therefore could not be codified. One site also reported that the data element “Medical Reason for Not Performing Neurological Evaluation” is not able to be calculated for the same reason. Despite these limitations, one practice reports that their EHR can successfully calculate the neurological evaluation measure as there would be no patient refusals for performance of a “neurological examination.” The other site reported that their EHR system needs modifications to be able to calculate the measure.

The TRAKnet Practice Management software used by two of the physician office sites was able to produce a Quality Measure report sorted by quality measure. The report lists the number of patients meeting the measure (numerator), the number of exclusions, the total number of eligible patients (denominator) and a percentage rate. Since the report is not generated at a patient-level, it was unable to be used as a report of data extracted from the EHR. An example of the report from one site follows:

QUALITY MEASURES						
Provider:						
Start Date: 01/01/2011 End Date: 12/31/2011						
For the most up to date Quality Measures please select the Update Database icon from the TRAKnet PM desktop, select 'Quality Measures' and click Update. If you have any questions, please contact TRAKnet PM customer service.						
Additional CQM						
NQF	PQRS	Name	Meets Perf.	Exclusions	Total	Rate
0056	163	Diabetes Foot Exam	96	0	120	80.00%
0059	1	Diabetes: HbA1c Poor Control	25	0	120	20.83%
0061	3	Diabetes: Blood Pressure Management	73	0	120	60.83%

The third physician office site, where paper records were reviewed, provided an example of an Allscripts report, calculating the numerator and denominator. No patient-level data was present.

Validation Against the Gold Standard Reliability

Parallel-forms reliability testing was performed by comparing manual abstraction of the data elements necessary to construct the measure from the medical records with Physician Quality Reporting System (PQRS) claims submission. Agreement was calculated between the two methods at the level of the numerator, denominator and exception (if applicable).

To validate inclusion in the numerator, the practice sites provided various identification methods. Two practices provided a report of the sampled list of patients per encounter with the PQRS codes submitted. The third site provided instructions on viewing the billing codes per dates or invoice within each patient's medical record.

Agreement rates were calculated and reported with kappa statistics with 95% confidence intervals to recognize any agreement that could be attributable to chance alone. **Results:** The measures were found to be highly reliable with agreement rates ranging from 93 to 100%.

INTRODUCTION

Diabetes Mellitus: Foot and Ankle Care measures were developed by the APMA and received time-limited endorsement July 31, 2008 from the National Quality Forum (NQF). The national quality strategy priorities include goals of promoting the most effective prevention and treatment practices for the leading causes of mortality. While the initial emphasis is on cardiovascular prevention, diabetic sequelae are both a personal and societal burden. Potential uses for the measures include public reporting and quality improvement for each specific organization. The measures can be implemented in various care settings including home health, hospitals, skilled nursing facilities, and nursing homes. To gain practical knowledge of the use of the measures in the field and to obtain full endorsement of the measures by the NQF, APMA requested that Telligen perform on-site reliability, feasibility, and validity testing of the Diabetic Foot and Ankle Care measures and report our findings.

APMA working through their Clinical Practice Advisory Committee (CPAC) utilized existing guidelines on diabetic foot care incorporating principles and recommendations from the American Diabetes Association task force and the joint clinical practice guidelines from the American College of Foot and Ankle Surgeons (ACFAS) and American College of Foot and Ankle Orthopedics and Medicine (ACFAOM). The measures focused on two important principles in ulcer prevention--proper shoe fit and identification of neurological deficits--particularly loss of protective sensation. Properly performing these measures should reduce ulcerations and ultimately reduce amputations in people with diabetes.

OBJECTIVES

The objective of this project was to successfully conduct reliability/validity testing on two NQF time-limited endorsed measures (NQF 0416 and 0417). Both measures were re-tooled as eMeasures to ultimately assist APMA in attaining full measure endorsement. Specifically, the goals of testing included:

- 1) evaluating the feasibility of collection, measurement and reporting of the data;
- 2) verifying that the reliability of the specifications, including the data element abstraction definitions prepared by Telligen in collaboration with APMA, resulted in consistent measurements; and

- 3) reliability of the APMA measures by performing parallel-forms testing, comparing abstracted data to PQRS claims data.

Testing was performed on paper medical records at one physician office site and in the EHR environment for two physician office sites. Testing included feasibility of use and reliability of the Neurological Evaluation and Evaluation of Footwear APMA-developed performance measures described below, using EHR systems and paper medical records as the data source. The objective of the feasibility and implementation testing was to assess the feasibility of the collection, measurement and reporting of the data, while also monitoring the associated costs. Reliability testing was also performed to determine whether the specifications, including the data abstraction definitions prepared by Telligen in collaboration with APMA, resulted in consistent measurements. Reliability testing was performed to compare the abstracted data to PQRS claims data.

METHODS

The following measures were tested in this project:

- Ulcer Prevention - Evaluation of Footwear
- Peripheral Neuropathy - Neurological Evaluation

See *Appendix I, Diabetes Mellitus: Foot and Ankle Care Measures*. This appendix includes measure title and statement, numerator, denominator and denominator exclusions.

A Feasibility and Reliability Testing Protocol was drafted by Telligen. *Appendix II Podiatry Diabetic Foot and Ankle Measures Feasibility and Reliability Testing Protocol*, includes:

- Objectives
- Number of Records Reviewed
- Sampling Method
- Pre-visit Procedures for On-site Data Abstraction
- On-site Visit Procedure
- Validation of PQRS Claims Data

As a component of feasibility testing, a detailed questionnaire was sent to the sites to explore whether electronic capture of all necessary data elements to compute each measure was inherent in the EHR. Information obtained about each data element included whether the data element was located in a discrete field in the EHR and whether that field was in a standard codified format. The information obtained is discussed further in the measure testing data element location table found later in this document. One practice site did not provide questionnaire results as they were not using an EHR during the measurement timeframe.

Reliability testing of the measures required testing site personnel to use the specifications provided by APMA to complete the necessary programming in the EHR to implement the measures in the EHR and evaluate if a performance report on eligible cases for each of the two

measures could be produced. If an EHR-generated report could not be provided, a report of submitted Quality Data codes would be required for the audit. A sample of patients was selected by the site utilizing a randomized sampling strategy to ensure a final sample of 100 patients qualified for the denominator and who received care during the measurement period. As part of the measure reliability testing, two Telligen abstractors performed on-site visual inspection of the medical record (each reviewed one half of the sample). To determine if the measures could be collected and calculated reliably, the measures and performance rates were manually constructed for each case. Administrative claim information (claims submitted containing Quality Data codes for PQRS) was compared with the information abstracted from the patient record to determine if the information submitted on the Medicare claim matched the documented care.

RECRUITMENT OF PILOT TEST SITE

As measurement moves towards automated reporting from EHRs, it is more and more important to test measures in various EHR environments. Additionally, it was important to ensure that selected practices would have an adequate sample size of patient records to test the two measures. APMA recruited sites with experience in reporting performance measures as well as previous involvement in APMA performance measure development. All three practice sites participated in the PQRS Program.

SITE CHARACTERISTICS

Participating site characteristics are displayed in the table below, followed by discussion of each individual site's characteristics.

Table 1. Site Characteristics

Site Name	Demographics	Number of Physicians	Number of Office Sites	Data Source (EHR, Paper)	2011 PQRS Diabetic Foot Care Measures submitted
Practice A	Physician-owned, single specialty	16	12	EHR	2
Practice B	Physician-owned, multi-specialty	9	1	Paper	2
Practice C	Physician-owned, single specialty	5	5	EHR	2

All three physician office sites participating in this measure testing project were located on the East coast, had two or more physicians, and were actively recruiting total physician involvement within their practice to adopt EHR documentation. EHR implementation for each site varied, from 2009, 2011, and 2012. The three sites submitted PQRS claims for both measures. All three physician office sites were using an EHR at the time of the on-site visit, but one site was using paper medical records for the measurement period being reviewed.

SECURITY AND PERSONAL HEALTH INFORMATION (PHI)

The abstraction team, Telligen, by virtue of their status as a federal Quality Improvement Organization (QIO), had access authorization under the HIPAA Privacy Rule 45CRF***164.512(d). The QIO has access to a random sample of medical records for data validity purposes. Access to these records are made available at the in-person, on-site visits or through secure channels via a login/password procedure utilizing web access remotely.

Security of abstracted data was maintained at all times. The abstraction database utilized was a Microsoft Access relational database residing on an encrypted laptop drive. Access to this information was only available after successfully supplying both the encryption password and user account authentication. After abstraction of data from each testing site, the database was transferred to a secured network location at Telligen, where it was only accessible by those with need to access for reporting. After transfer of the database to the network, each laptop was wiped of information. Data contained on the network is backed up on tape media. Tapes are rotated and written over every four weeks.

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.

PRE-VISIT PREPARATION

All documentation prepared by APMA was reviewed as a starting point. Data element definitions for abstraction were drafted for each measure in order to assess the feasibility of use, reliability, and validity of the Evaluation of Footwear and Neurological Evaluation performance measures.

From this document, a preliminary list of data elements was drafted. The list of data elements and data abstraction definitions were reviewed with APMA. Feedback was received and revisions were completed for several definitions. Refer to *Appendix IV, Data Elements/Data Abstraction Definitions* for the final definitions. Discussions regarding data definitions and paper tool design (used for electronic tool creation) were initiated April 2012 followed by development of the paper tool. Refer to *Appendix V Paper Tool* for the data abstraction paper tool. After the final site was recruited by APMA, initial contact was made by e-mail May 15, 2012 with each of the physician office sites. A telephone conference was set up with each site that included the lead physician and any designee from the site knowledgeable in the functionality and capability of their EHR.

Once the data element definitions for abstraction were finalized, an electronic data abstraction tool was developed in preparation for testing. The data element definitions were designed to be used in conjunction with the data abstraction tool.

As part of the preparation for visiting the physician office sites, the following documents were sent to each site:

- Podiatry Diabetic Foot and Ankle Measures Feasibility and Reliability Testing Protocol
- Data Abstraction Definitions
- Data Element Tables
- Eligible Population
- NQF eMeasure Specifications (NQF 0416, NQF 0417)

EVALUATION OF FOOTWEAR AND NEUROPATHY EVALUATION SITE SAMPLING STRATEGY

Instructions were sent by e-mail to the contact at the practice site with proper coding (CPT, ICD-9, G-code etc.) to identify the Evaluation of Footwear and Neurological Evaluation measures sample population. The sample size included a minimum of 100 patients for each measure with an oversample. Records could be utilized for both measures. In addition to the specified measurement timeframe, the sample criteria included:

- Patients with diabetes mellitus aged ≥ 18 before the encounter or procedure
- Payment Source of Medicare (site will pull Medicare claims first and fill in the rest with any claim that satisfies the sampling methodology)
- Claims submitted using ICD-9 or SNOMED-CT diagnosis codes **and** CPT or SNOMED encounter or procedure codes **and not** ICD-9 or SNOMED codes for bilateral amputation

The dataset for the project was drawn from PQRS participating physicians at each practice for the aforementioned APMA measures. The sample set was for outpatient encounters for calendar year 2011, with one exception. One site had a chart sample timeframe between October 1, 2011 and May 1, 2012. A combination of diagnosis, encounter or procedure codes were pulled to generate the randomized sample. Refer to *Appendix IV, Data Elements/Data Abstraction Definitions* which contain the diagnoses and procedure codes for use in the sample selection.

Denominator overlap was considered in sample selection. Because the denominator criteria were the same for both measures, abstraction for both measures could be performed on each record. Therefore, 100 patients were not selected for *each* measure. Each site selected the number of patients based on the sampling strategy.

ON-SITE MEASURE TESTING

The sites were visited by the two abstractors the weeks of October 1 and November 5, 2012. Patient medical records were accessed through TRAKnet Practice Management software at two of the physician office sites. The third site provided paper medical records for the measurement testing period; the practice has since begun using Allscripts EHR software. A demonstration of the Allscripts product, including an example of an E & M Detail system-generated report was provided by one of the participating physicians. The Allscripts reporting system provides the ability to produce reports such as diabetic patients with foot exams or patients with multiple diagnoses.

At the three physician office sites, a brief tutorial was provided by office staff about the EHR or paper medical record to show where data elements could likely be found.

Each practice site provided a list of patient records to be sampled and their respective Data Quality codes submitted via Medicare claims for PQRS. The abstractors collected data using the Telligen-developed electronic data abstraction tool. Each abstractor collected data for half of the patient sample. Following completion of the on-site abstraction, a comparison of numerator hits, denominator hits, and exceptions between data collected via the abstraction tool and the submitted PQRS Data Quality codes was manually performed. All mismatches were noted. The comparison results are presented in *Tables 2 and 3*.

RESULTS OF RELIABILITY TESTING

The project results include validity against the gold standard reliability testing of the Evaluation of Footwear and Neurological Evaluation measures, comparison of Medicare claims data compared to visual inspection of the paper and EHR patient record, and manual calculation of measure performance. Parallel-forms reliability testing was conducted using the PQRS measures submitted by the three sites. The purpose of the reliability testing was to evaluate whether the measure definitions and specifications, as prepared by APMA, yield stable and consistent measurements. The project was statistically powered to identify significant differences between levels of measure reliability using the kappa statistic. The primary finding from the study was the kappa statistic of reliability at the level of measure numerator, denominator, and exception. The findings for the Evaluation of Footwear and Neurological Evaluation measures are noted in the following *Tables 2 and 3*.

Interpretation of the kappa statistic is generally thought to be as follows:

Kappa Strength of Agreement ¹

0.00	Poor
0.01 – 0.20	Slight
0.21 – 0.40	Fair
0.41 – 0.60	Moderate
0.61 – 0.80	Substantial
0.81 – 0.99	Almost perfect

Performance measure results were calculated for the Evaluation of Footwear and Neurological Evaluation measures. There were no measure exceptions noted in any of the medical records abstracted.

RELIABILITY & PERFORMANCE RATES TESTING RESULTS: EVALUATION OF FOOTWEAR MEASURE

Table 2. Reliability Testing Results: Evaluation of Footwear Measure

Assessment of Evaluation of Footwear									
			Agreement is displayed between PQRS and manual abstraction*						
N=286	PQRS (n)	Manual (n)	Yes/Yes ***** (P/M)	Yes/No (P/M)	No/Yes (P/M)	No/No (P/M)	Kappa* * Rate	95% CI	Agreement %
<i>Denominator</i>	286	286	286	0	0	0	n/c***	n/c***	100%
<i>Numerator</i>	278	266	262	16	4	4	0.256	(0.036, 0.476)	93.0%
<i>Exceptions</i>	0	0	0	0	0	0	n/c***	n/c***	100%
<i>Performance rate</i>	97.2%	93.0%							

P = PQRS submitted G-code; M = Manual abstraction; N= sample size; n= number of records; n/c = not calculable

*Legend of agreement documentation:

- Yes/Yes indicates that both the PQRS G-code and the abstractor indicated “Yes” (per definition of G-code) that the patient met the measure component (numerator, denominator, exception (if applicable));
- Yes/No indicates that the PQRS G-code indicated “Yes” (per definition of G-code) that the patient met the measure component, whereas, the abstractor answered “No” that the patient did not meet the measure component;
- No/Yes indicates that the PQRS G-code indicated “No” (per definition of G-code) that the patient did not meet the measure component, whereas, the abstractor answered “Yes” that the patient did meet the measure component; and
- No/No indicates that both the PQRS G-code (per definition of G-code) and the abstractor indicated “No” that the patient did not meet the measure component.

**The Kappa statistic was calculated to measure the agreement between two data sources by considering agreement between data sources beyond that expected by chance. A kappa of 1.0 indicates perfect agreement and a kappa of 0 indicates agreement attributable solely to chance²; the higher the kappa, the less likely that agreement was by chance.

¹Landis, J. R. and Koch, G. G. (1977)

“The measurement of observer agreement for categorical data” in Biometrics. Vol. 33.pp 159-174

***In instances where there is 100% agreement, the kappa statistic cannot be calculated.

****The kappa is significantly reduced if one classification category dominates. In these cases, the YES category dominates, as one data source had zero NO responses, and the other had very few NO responses. In these cases, with such wide confidence intervals, the kappa is not a valid statistic. This is a limitation of the kappa statistic.

The performance rate with no exceptions was higher for data extracted from the Medicare claims data than for records manually abstracted. Measure compliance varied between data extracted from EHR and paper medical record documentation. In paper medical records, 16 patients did not meet the measure component when the auditors were unable to find documentation supporting the performance of a footwear evaluation in the measurement year. In the EHR evaluation, supporting documentation was not found for one patient. The abstractors were able to find data element information in non-discrete fields in the EHR. For example, footwear interventions performed was usually found as text in the visit notes.

RELIABILITY & PERFORMANCE RATES TESTING RESULTS: NEUROLOGICAL EVALUATION MEASURE

Table 3. Reliability Testing Results: Neurological Evaluation Measure

Assessment of Neurological Evaluation									
			Agreement is displayed between PQRS and manual abstraction*						
N=286	PQRS (n)	Manual (n)	Yes/Yes **** (P/M)	Yes/No (P/M)	No/Yes (P/M)	No/No (P/M)	Kappa** Rate	95% CI	Agreement %
<i>Denominator</i>	286	286	286	0	0	0	n/c***	n/c***	100%
<i>Numerator</i>	286	284	284	2	0	0	n/c***	n/c***	99.3%
<i>Exceptions</i>	0	0	0	0	0	0	n/c***	n/c***	100%
<i>Performance rate</i>	100%	99.3%							

Note: See legend definitions on pages 13.

The performance rate with no exceptions was somewhat higher for data extracted from the Medicare claims data than for records manually abstracted. Measure compliance varied between data extracted from EHR and paper medical records. In paper medical records, two patients did not meet the measure numerator when the auditors were unable to find documentation supporting the intent of the measure. Evaluation of EHR documentation found evidence of performance of a neurological evaluation in the measurement year for all records reviewed.

² Viera AJ, Garrett JM. Understanding Interobserver Agreement: The Kappa Statistic. Fam Med 2005;37(5):360-3

PERFORMANCE MEASURE RESULTS

Performance measure results were calculated for the Evaluation of Footwear and Neurological Evaluation measures. Performance results were based on a visual inspection of the medical record for documentation supporting the performance of footwear and neurological evaluations for each sampled patient. Medicare claims data is not a factor in the displayed performance rate. The results are a combination of data extracted from EHR and paper medical records at the three office sites. The performance rates were higher for data extracted from the EHR than from the paper medical record for each measure. No exceptions were found in the sampled population.

Table 4. Diabetic Foot & Ankle Care Measure Performance Results

Measure	Performance Rate	
Evaluation of Footwear	266 of 286	93%
Neurological Evaluation	284 of 286	99%

FEASIBILITY TESTING

The objective of feasibility testing of the Evaluation of Footwear and Neurological Evaluation measures is to assess the feasibility of data collection, measurement and reporting of these performance measures in a timely manner and at a reasonable cost. To undertake this part of the measure testing process, information was gathered in several different ways:

- Observation and documentation of data elements that were absent or inconsistently documented in the EHR/paper medical record tracked via the *Appendix III, Checklist for Feasibility Testing/Results*
- Pre-visit retrieval of data element availability from site
- Follow-up evaluation of whether data elements were in discrete fields and coded using a standard code set, as reported in the Measure Testing Data Element Table responses, provided by the site contact
- Time spent on abstraction

MEASURE TESTING DATA ELEMENT TABLE

Two physician office sites completed the Measure Testing Data Element Location Tables that identified where the data elements were contained in their respective EHR. The sites also identified if the data elements were located in a discrete field and were coded using a standard code set. Refer to *Appendices VI - VII, Measure Testing Element Tables* for location of the data elements. One practice site did not complete the data element questionnaire as they were not using the EHR environment during the measurement timeframe.

DATA ELEMENT LOCATION TABLE

The two abstractors recorded the location of each data element for each measure. The percentage of instances where the data elements were found in the identified locations was also noted. Refer

to *Appendices VIII – X, Percentage of Time Where Data was Found by the Abstractors* for further information.

EVALUATION OF FOOTWEAR/NEUROLOGICAL EVALUATION TESTING FINDINGS

Evaluation of Footwear

Assessment of Evaluation of Footwear

The denominator for this measure includes all patients aged 18 years and older with a diagnosis of diabetes. The numerator includes patients who were evaluated at least once during the measurement period (12 months) for proper footwear and sizing, or a footwear evaluation was not performed, or not performed for documented reasons. G-codes used to report the numerator of the measure are:

- G8410: Footwear evaluation performed and documented
- G8416: Clinician documented that patient was not an eligible candidate for footwear evaluation measure
- G8415: Footwear evaluation not performed

Evaluation for proper footwear for the purposes of this measure is defined as documentation of a foot examination documenting the vascular, neurological, dermatological, and structural/biomechanical findings. The footwear should be measured using a standard measuring device and counseling on appropriate footwear should be based on risk categorization.

At one practice site, in 23 medical records, the patient did not meet the diagnosis of diabetes. It was found that the practice submitted PQRS on all patients, submitting G-8416 (not an eligible candidate for footwear evaluation). These records were not abstracted, as they did not qualify for the denominator. The oversample was available to supplement records.

For the site with paper medical records, verification that the patient met the age criteria was challenging. This site was a multi-specialty clinic; therefore the record included multi-specialty notes. An “Administrative” sheet was often not found and other sources for age had to be referenced, (e.g., history and physical, insurance).

To determine if the patient had a history of bilateral amputation, multiple source documents in the paper medical records required review. Verification of measure inclusion was found in visit notes and consultations.

Multiple visits in the chart had to be researched for Evaluation of Footwear as it is typically documented once per year and not during every visit. Also noted in a few medical records was the use of “same.” The previous visit note was referenced to validate what “same” indicated. This finding was not a factor in EHR charting.

In some EHRs, inconsistencies in documentation of diabetes were found. For example, diabetes was not listed in the medical history of the patient but diabetic teaching and references to diabetic shoes were found. Another inconsistency in charting that was found was regarding shoes. “Wearing inappropriate shoes” was documented with the patient prescribed diabetic shoes, but the

EHR visit note had checked “appropriate type of shoe”, “appropriate condition of shoe”, “appropriate shoe size/measure”, and “appropriate innersoles/orthotics” within the same visit note. In most medical records, all three practice sites used the form “Annual Comprehensive Diabetes Foot Exam Form” which provided consistencies in documentation. The form provided detailed documentation, including patient history, review of systems, and physical exam. Exams performed (e.g., Foot exam, Neurological exam, Footwear evaluation) were found in the EHRs comprehensive notes, with the consistent statement that Evaluation of Footwear was “performed one time or more per year based on ADA guidelines.” EHR visit notes were clearly categorized and included Dermatologic exam, Vascular exam, Neurological exam, Assessment, and Plan/Counseling.

Two physician office sites reported that “Footwear Evaluation not Performed for Documented Reasons” was not in a discrete field or able to be codified. The auditors found no instances where documentation was present reporting that the patient refused an evaluation of footwear. Footwear intervention (findings/counseling) was reported by one site as not being in a discrete field or codifiable. Components of the footwear evaluation, including education and counseling, were found in medical records for all three sites.

The data elements that were necessary for calculation of this measure were readily available at all sites and found most consistently in office visit notes. Abstraction time required for this measure was longer as footwear evaluation was not documented at each office visit and required further research.

Neurological Evaluation

Assessment of Neurological Evaluation

The denominator for this measure includes all patients aged 18 years and older with a diagnosis of diabetes. The numerator includes patients who had a neurological examination of their lower extremities performed at least once during the measurement period (12 months), or a lower extremity neurological examination was not performed, or not performed for documented reasons. G-codes used to report the numerator of the measure are:

- G8404: Lower extremity neurological exam performed and documented
- G8406: Clinician documented that patient was not an eligible candidate for lower extremity neurological exam measure
- G8405: Lower extremity neurological exam not performed

Lower Extremity Neurological Exam for the purposes of this measure is defined as a documented evaluation of motor and sensory abilities and may include: reflexes, vibratory, proprioception, sharp/dull and 5.07 filament detection.

As noted above at one practice site, in 23 medical records, the patient did not meet the diagnosis of diabetes. It was found that the practice submitted PQRS on all patients, submitting G-8406 (not

an eligible candidate for footwear evaluation). These records were not abstracted, as they did not qualify for the denominator. The oversample was available to supplement records.

Without the use of an EHR system, it was noted in several of the paper medical charts that a lower extremity neurological evaluation was “unchanged from previous visit.” This required additional research to find the previous visit note and validate the performance of a neurological evaluation.

There was a significant difference in the documentation of neurological evaluation versus evaluation of footwear. Components of the neurological lower extremity exams were more consistently recorded within an EHR system environment. Only two submitted claims of neurological evaluation could not be verified versus a number of medical records in which documentation of an evaluation of footwear could not be found as being performed in the measurement period. Some of the medical records had evaluation of footwear in 2009, 2010, or 2012, but not during the measurement timeframe. Others had no documentation of a neurological evaluation or evaluation of footwear in the podiatry notes, or only had one visit note for the measurement timeframe with no documentation of a neurological evaluation or evaluation of footwear. In several of the charts with no documentation of a neurological evaluation or evaluation of footwear, the patient was seen for a specific task such as debridement of a lesion or an assessment of a chronic wound. This statistical difference could be due to the practices routinely doing lower extremity neurological evaluation every visit and typically only yearly footwear evaluations, according to the office site physicians.

The data elements that were necessary for calculation of this measure were readily available at all sites and found most consistently in office visit notes. There were no instances where documentation was present reporting that the patient refused the neurological evaluation or one was not performed for medical reasons. Per one physician, “the patient does not dictate if I need to perform a neurological examination.”

EHR CODING SETS AND DATA SOURCES

As previously noted, two of the three sites had EHR capability for the measurement timeframe. Common discrete data fields found by the abstractors were:

- Demographic information, age
- Diagnosis/problem lists
- Examination performed

The abstractors matched on a variety of data element locations, but there were numerous places where this information could be found within the medical record at each site. An example of this was *Diagnosis Confirmation*; in addition to the problem list, documentation was often found in the office visit notes and consultations.

Some of the data elements needed for measure calculation were located in progress notes, consultations, or generic forms, which are not located in discrete fields. Sites differed on whether their EHR could capture two data elements in a discrete field: performance of an evaluation of footwear and the medical reason for not performing a neurological evaluation. Sites agreed that patient reasons for not performing evaluations for both measures are not in discrete fields, would require modifications to their EHR system to capture, or the element would not be feasible to capture as there would be no patients refraining from having the exam performed as requested by the patient. See *Appendices VIII - X, Percentage of Time Where Data was Found by the Abstractors* for specific data element locations.

Timing/Cost

The average time for the abstractors to abstract the data elements from each medical record ranged from 5 to 10 minutes. The abstraction times decreased as familiarity with the medical record increased. The amount of time to abstract the two measures varied between data extracted from the EHR than from paper medical records. The evaluation of footwear and neurological evaluation measures were abstracted from each patient's medical record. Assuming only cost for the abstraction of each medical record, the cost ranged from \$6.90 to \$13.81 per patient record. Travel expenses and any work with the sites prior to and following the site visit were not included, although all applicable overhead rates and administrative costs were applied.

PHYSICIAN QUALITY REPORTING SYSTEM (PQRS) RELIABILITY

The practice sites were queried to determine if they participated in the PQRS Program for these measures during the measurement timeframe. All three sites participated in the PQRS program. At each on-site visit, abstractors conducted parallel-forms reliability testing to validate the PQRS claims data. This reliability testing was performed using the same patient medical records identified for each foot and ankle care measure.

The abstractors compared the Quality Data Codes (QDC) submitted by the practice on the claim(s) form representing the eligible encounter with documentation in the patient medical record to determine if the code submitted could be validated in the medical record. A QDC is a CPT II code or a HCPCS G-code that corresponds to a quality action and is provided within each PQRS measure specification.

Two practice sites provided a billing printout for eligible patients with the HCPCS G-codes as source documents for the parallel forms reliability testing. The third site provided access to their electronic health record screens for billing/invoices which displayed the submitted HCPCS G-code information.

Table 5. PQRS Reliability Testing

Measure	Number of PQRS Claims Reviewed	Claim Information Verified in Record	Percent Verified
Evaluation of	286	266	93%

Footwear			
Neurological Evaluation	286	284	99%

RECOMMENDATIONS

Based on the cumulative findings of the abstractors who performed the measure testing activities for this project, recommendations are summarized here.

The specifications for Measure #417, Diabetic Foot & Ankle Care, Peripheral Neuropathy – Neurological Evaluation, do not contain a definition of the Risk Categorization System. A recommendation would be to define the risk categorization in the measure specifications.

Based on the understanding that foot and ankle care measures cannot be performed on patients with bilateral foot amputations, it is recommended to update the narrative description of the Denominator in the NQF measure documentation for each measure. In addition, it is recommended to add the diagnosis codes for bilateral amputation as an exclusion to the Denominator Statement.

The specifications for Measure #417, Diabetic Foot & Ankle Care, Peripheral Neuropathy – Neurological Evaluation, do not quantify the number of neurological exam components required to meet the Numerator. Based on medical record review noting inconsistencies of the components evaluated, Telligen would suggest providing clarity to the Numerator Narrative Description specifying if all, one or more, or a specific number of components are required.

The specifications for Measure #416, Diabetic Foot & Ankle Care, Ulcer Prevention – Evaluation of Footwear, do not quantify the number of examination components required to meet the Numerator. In addition, it does not specify if sizing and counseling is required. Based on medical record review noting inconsistencies of the components evaluated and performed, Telligen would suggest providing clarity to the Numerator Narrative Description specifying if all, one or more, or a specific number of components are required.

APPENDICES

Appendix I – Diabetes Mellitus: Foot and Ankle Care Measures

Measure Title	Numerator	Denominator	Denominator Exclusions
<p>Measure Title: Diabetes Mellitus: Foot and Ankle Care, Ulcer Prevention – Evaluation of Footwear</p> <p>Measure Statement: Percentage of patients aged 18 years and older with a diagnosis of diabetes mellitus who were evaluated for proper footwear and sizing</p>	<p>Numerator Statement: Patients who were evaluated for proper footwear and sizing at least once within 12 months</p>	<p>Denominator Statement: All patients aged 18 years and older with a diagnosis of diabetes mellitus who had a patient encounter during the reporting period without a history of bilateral amputation</p>	<p>Documentation of medical reason(s) for not performing a footwear evaluation</p> <p>Documentation of patient reason(s) for not performing a footwear evaluation</p>
<p>Measure Title: Diabetes Mellitus: Foot and Ankle Care, Peripheral Neuropathy – Neurological Evaluation</p> <p>Measure Statement: 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</p>	<p>Numerator Statement: Patients who had a lower extremity neurological exam performed at least once within 12 months</p>	<p>Denominator Statement: All patients aged 18 years and older with a diagnosis of diabetes mellitus who had a patient encounter during the reporting period without a history of bilateral amputation</p>	<p>Documentation of medical reason(s) for not performing the lower extremity neurological exam</p> <p>Documentation of patient reason(s) for not performing the lower extremity neurological exam</p>

Appendix II – Podiatry Diabetic Foot and Ankle Measures Feasibility and Reliability Testing Protocol

I. Objective

To successfully conduct reliability/validity testing on two NQF time limited endorsed measures* (NQF 0416 and 0417), both of which have been re-tooled as eMeasures to ultimately assist APMA in attaining full measure endorsement.

II. Number of Records Reviewed

- Minimum number of 100 individual patient records will be reviewed at each of the four practice sites

III. Sampling Method

- To arrive at a sample of 100 records per site, we will over-sample for a total of 110 medical records
- The sample will be from the reporting year of 1/1/2011 to 12/31/2011, who also met the criteria listed below.
 - Patients with diabetes mellitus aged ≥ 18 before the encounter or procedure
 - Payment Source of Medicare (site will pull Medicare claims first and fill in the rest with any claim that satisfies the sampling methodology)
 - Claims were submitted using ICD-9 or SNOMED-CT diagnosis codes **and** CPT or SNOMED encounter or procedure codes **and not** ICD-9 or SNOMED bilateral amputee codes (Page 3 Data Abstraction Definitions/Table 1)
- Telligen is providing the following sampling methodology to the practice sites:
 - Identify records for 100 patients using the coding noted in Table 1 whose Social Security number ends in a specific number, i.e., 2 and 4

IV. Pre-visit Procedures for On-site Data Abstraction

- Abstractors will send electronic notification to the practice site that includes the following information:
 - Description of sampling methodology
 - Data Element Tables (location of data in the site's EHR)
 - Confirmation of availability of staff at practice site
 - Statement of approximate length of on-site visit
- Abstractors will phone office contact 1 week after information is sent to the practice site (discuss any sampling problems and discuss dates for the on-site visit)

V. On-site Visit Procedure

- Introduction to staff and EHR
- Discuss security issues/logon information with practice site contact
- Practice site will provide a brief tutorial of the EHR

- Abstractors (2) will need to use two of the practice site computers in order to access the practice site's EHR. The two abstractors will also have laptops loaded with a pre-approved data collection tool in order to perform the data abstraction

VI Validation of PQRS Claims Data

- For the practice sites participating in 2011 PQRS, abstractors will conduct a validation of the PQRS claims data for sites submitting PQRS data. The process includes:
 - Identification of a random sample of Medicare claims submitted containing Quality Data Codes for PQRS
 - Obtain a copy of the Medicare claim from the site
 - Compare the information submitted on the Medicare claim with information in the patient record (**same sample of patients**) to determine if the information submitted matches the PQRS Measure Specifications as posted on the CMS website

Confidentiality of data - In the course of this on-site review of records, Telligen personnel will view Personal Health Information (PHI) as they review patient records. Telligen is a Quality Improvement Organization (QIO) that serves as a health oversight agency for the Centers for Medicare and Medicaid Services (CMS) and is therefore authorized to have access to PHI. Moreover, PHI may be disclosed to Telligen without patient authorization under the HIPAA Privacy Rule at 45 CFR ***164.512(d).

Appendix III – Checklist for Feasibility Testing/Results

Data Elements:	Missing Data Elements? Yes/No - Comments	Underspecified Data Elements? Yes/No (Could we have added anything in the specification to be able to collect this element?)	Confusing or incomplete measure specifications, (add input from physician, or abstractor findings)	Other Barriers in Data Collection? List (i.e., part paper part EHR, 2 EHRs used to gather information)	Misc. (include estimated time to abstract each measure)
Diabetic Foot and Ankle Care Data Elements					
Age of Patient					
Confirm Diabetes Diagnosis					
Bilateral Amputation of Feet					
Peripheral Neuropathy - Neurological Evaluation					
Ulcer Prevention - Evaluation of Footwear					

Appendix IV – Diabetes Mellitus: Foot and Ankle Care Data Elements/Data Abstraction Definitions

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCEPTIONS
Clinic ID [CLINICID]	Instruction: Enter the assigned site number of the clinic.	Site 1 Site 2 Site 3	None
Age [AGE]	Instruction: Determine if the patient is 18 years or older before the encounter or procedure occurring during the measurement period. Yes (1): Select this option if the patient is 18 years or older. No (0): Select this option if the patient is <u>not</u> 18 years or older. <u>IF NO - STOP ABSTRACTION</u>	Patients aged 18 years and older	None
Confirm Diabetes Diagnosis [DMCONFIRM]	Instruction: Determine if the patient has a documented diagnosis of diabetes in the office/clinic record. Yes (1): Select this option if the patient has a documented diagnosis of diabetes. No (0): Select this option if the patient does not have a documented diagnosis of diabetes <u>IF NO - STOP ABSTRACTION</u>	See diagnosis codes on Table One Adult onset diabetes mellitus, AODM, adult onset diabetes, AOD, diabetes mellitus, diabetes, Type II diabetes, IDDM, insulin dependent diabetes mellitus, NIDDM, non-insulin dependent diabetes mellitus, Type I diabetes	None

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCEPTIONS
Bilateral Amputation of the Feet [BILATAMP]	<p>Instruction: Determine if the patient has a history of bilateral foot/leg amputation.</p> <p>Yes (1): Select this option if the patient has a history of bilateral foot/leg amputation.</p> <p>No (0): Select this option if the patient does not have a history of bilateral foot/leg amputation.</p> <p><u>IF YES - STOP ABSTRACTION</u></p>	See bilateral amputee codes on Table One	None
Peripheral Neuropathy – Neurological Evaluation (#417) [NEUROEVAL]	<p>Instruction: Determine if the patient had a lower extremity neurological exam performed at least once <u>during the measurement period</u>.</p> <p>Yes (1): Select this option if the patient had a lower extremity neurological exam performed.</p> <p>No (0): Select this option if the patient did not have a lower external neurological exam performed.</p> <p>Not Performed for Medical Reasons (3): Select this option if the patient did not have a lower external neurological exam performed for medical reasons.</p> <p>Not Performed for Patient Reasons (4): Select this option if the patient did not have a lower external neurological exam performed for patient reasons.</p>	<p>Lower Extremity Neurological Exam – Consists of a documented evaluation of motor and sensory abilities and may include: reflexes, vibratory, proprioception, sharp/dull and 5.07 filament detection. The components listed are consistent with the neurological assessment recommended by the Task Force of the Foot Care Interest Group of the American Diabetes Association. They generally recommend at least two of the listed tests be performed when evaluating for loss of protective sensation; however the clinician should perform all necessary tests to make the proper evaluation.</p> <ul style="list-style-type: none"> • Vibratory Sense Finding • Patellar or Achilles Reflex Finding • Proprioception Finding • Sharp/Dull Sensation Finding • Monofilament Detection Finding <p>Note: Testing must occur during the same office/clinic visit.</p>	None
Ulcer Prevention – Evaluation of Footwear (#416)	<p>Instruction: Determine if the patient was evaluated for proper footwear and sizing at least once <u>during the</u></p>	<p>Evaluation for Proper Footwear – Includes a foot examination documenting the vascular, neurological, dermatological, and structural/biomechanical findings. The</p>	None

DATA ELEMENTS/ VARIABLE NAMES	INSTRUCTIONS (DEFINITIONS, VALID VALUES)	INCLUSIONS/SYNONYMS	EXCEPTIONS
[FTWEAREVAL]	<p><u>measurement period.</u></p> <p>Yes (1): Select this option if the patient was evaluated for proper footwear and sizing.</p> <p>No (0): Select this option if the patient was not evaluated for proper footwear and sizing.</p> <p>Not Performed for Patient Reasons (4): Select this option if the patient was not evaluated for proper footwear and sizing for patient reasons.</p>	<p>foot should be measured using a standard measuring device and counseling on appropriate footwear should be based on risk categorization.</p> <ul style="list-style-type: none"> • Pulse Finding of Foot • Skin Finding • Neurological Finding of Foot • Structural/Biomechanical Finding of Foot • Foot Measurement • Counseling supported by Physical exam finding: Appropriateness of Footwear 	

Eligible Patient Population Criteria

Diabetes Mellitus: Foot and Ankle Care – Percentage of patients aged 18 years and older with a diagnosis of Diabetes Mellitus AND who had a patient encounter during the reporting period AND NOT a bilateral amputee.

Table A – Eligible Patient Population Criteria

Patients aged ≥ 18 years on Date of Encounter		
AND		
Diabetes Diagnosis Codes		
ICD-9-CM: 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		
SNOMED-CT: 111552007, 11530004, 190331003, 190368000, 190369008, 190372001, 190389009, 190390000, 199229001, 199230006, 23045005, 237599002, 237604008, 237618001, 28032008, 28453007, 314771006, 290002008, 313435000, 313436004, 314772004, 314893005, 314902007, 314903002, 359638003, 359642000, 44054006, 46635009, 73211009, 81531005, 9859006, 70694009, 314894004, 314904008, 441628001, 422228004, 420414003		
AND		
Encounter/Procedure Codes		
CPT: 10060, 10061, 10180, 11000, 11040, 11041, 11042, 11043, 11044, 11055, 11056, 11057, 11719, 11720, 11721, 11730, 11740, 97001, 97002, 97802, 97803, 99201, 99202, 99203, 99204, 99205, 99211, 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, 99251, 99252, 99253, 99254, 99255		
SNOMED-CT: 36777000, 85875009, 312775003, 312733004, 240994004, 19780006, 78391005, 19697009, 30785004, 265698006, 53841003, 225148005, 31064000, 240994004, 46863009, 2480009, 35646002, 177278007, 8367003, 241009009, 62271008, 446403000, 447075007, 118442004, 118443009, 284181007, 386496003, 177694006		
AND NOT		
Bilateral Amputee		
ICD-9-CM: 896.2, 896.3, 897.6, 897.7		
SNOMED-CT: 445498009, 89824004, 36211009, 13093003, 73600009, 213378007, 210767003, 210752002, 371191006		
OR		
Left (one or more codes)	AND	Right (one or more codes)
SNOMED-CT: 308096001, 308098000		SNOMED-CT: 308095002, 308097005

Appendix V – Podiatry (APMA) Data Collection Paper Tool

Clinic ID # _____ Patient ID# _____ Abstraction Time _____

Demographics

Was the patient 18 years or older at the time of the first encounter or procedure (AGE)?

___ Yes

___ No (If no, stop abstraction)

Location of Documentation (AGELOC):

___ Administration sheet

___ Other Location (specify):

Documented diagnosis of Diabetes Mellitus in the office/clinic record (DMCONFIRM)?

___ Yes

___ No (If no, stop abstraction)

Location of Documentation (DMLOC):

___ Consultation ___ Office Progress Note ___ Problem/Diagnosis list ___ Not Available

___ Other Location (specify):

Documented history of bilateral foot/leg amputation (BILATAMP)?

___ Yes (If yes, stop abstraction)

___ No

Location of Documentation (BILATAMPLOC):

___ Consultation ___ Office Progress Note ___ Problem/Diagnosis list ___ Not Available

___ Other Location (specify):

Neurological Evaluation

Did the patient have a Lower Extremity neurological exam performed at least once during the measurement period (NEUROEVAL)?

___ Yes

If Yes, Location of Documentation (NEUROEVALLOC):

___ Office Progress Note

☐ Not Available

☐ Other Location (specify):

☐ No

☐ No / medical reason(s) documented (verbatim text):

Medical reason(s) – Location of Documentation (NEUROMEDLOC):

☐ Office Progress Note

☐ Not available

☐ Other Location (specify):

☐ No / patient reason(s) documented (verbatim text):

Patient reason(s) – Location of Documentation (NEUROPTREASLOC):

☐ Office Progress Note

☐ Not available

☐ Other Location (specify):

Footwear Evaluation

Was the patient evaluated for proper footwear and sizing at least once during the measurement period (FTWEAREVAL)?

☐ Yes

☐ No

☐ No / patient reason(s) documented (verbatim text):

Patient reason(s) – Location of Documentation (FTPTREASLOC):

☐ Office Progress Note

☐ Not available

☐ Other Location (specify):

Footwear and sizing – Location of Documentation (FTWEAREVALLOC):

☐ Office Progress Note

☐ Not available

☐ Other Location (specify):

Appendix VI – Evaluation of Footwear Element Table

Data Element Variable	Standard Category: Component of the standard element that classifies the type of code set (e.g. diagnosis, medication, procedure)	Data Type: Describes how a given standard element is used (e.g. diagnosis active, medication administered, procedure ordered)	Taxonomy ICD-9/ICD-10/CPT/ CPT II/SNOMED/ HCPCS/RxNorm/ LOINC/HL7 Select all that apply	Location	¹ Is there a discrete field to capture this information? (Y/N)	² If Yes, is this a codifiable field? (Y/N)	Can your EHR calculate this element/measure? (Y/N)	If not, why not? For example, would modifications to the EHR or office workflow be needed? (Type your comments below)
A = Site A response; C = Site C response								
Age	Individual characteristic	Patient characteristics	ICD-9: A HL7: C	EHR (Query pt Birthdays): A Administrative sheet: C	Yes: A, C	Yes: A, C	Yes: A, C	
Confirm Diagnosis of Diabetes	Condition/diagnosis/problem	Diagnosis, active/inactive	ICD-9: A, C	Office progress note: A, C Problem/Diagnosis list: A, C	Yes: A, C	Yes: A, C	Yes: A, C	
Bilateral Amp. of the Feet	Condition/diagnosis/problem	Diagnosis, active/inactive	ICD-9: A, C	Office progress note: A, C Problem/Diagnosis list: C	Yes: A, C	Yes: A, C	Yes: A, C	
Ulcer Prev. – Eval. of Footwear	Physical Exam	Physical Exam, finding Physical Exam, performed	G8410: A Text: C	Office progress note: A, C Created by G8404: A	Yes: A, C	Yes: A, C	Yes: A, C	
Ulcer Prev. – Eval. of Footwear	Intervention	Intervention, performed	G8410: A Text: C	Office progress note: A, C G-code but all get exam annually: A	Yes: A No: C	Yes: A No: C	Yes: A No: C	
Patient Reason for No Eval. of Footwear	Physical Exam	Physical Exam, finding	If previously performed: A Text: C	Office progress note: A, C	No: A, C	No: A, C	No: A, C	
Can your EHR calculate this measure?							Yes: A	No: C (Modifications would be needed to the

			EHR)
Do Scores Obtained from Measure as Specified Accurately Differentiate Quality of Performance Across Providers (Face Validity)?	A: These are provider compliance measures, yet are performed on a vast majority of these patients.	C: I believe that the evaluation of footwear is a very good way for ulcer prevention. Poor shoe gear can lead to unequal pressure put on the foot. The only time that I would not evaluate Footwear is if the patient was a bilateral amputee which is covered in the measure.	

Appendix VII – Neurological Evaluation Element Table

Data Element Variable	Standard Category: Component of the standard element that classifies the type of code set (e.g. diagnosis, medication, procedure)	Data Type: Describes how a given standard element is used (e.g. diagnosis active, medication administered, procedure ordered)	Taxonomy ICD-9/ICD-10/CPT/ CPT II/SNOMED/ HCPCS/RxNorm/ LOINC/HL7 Select all that apply	Location	¹ Is there a discrete field to capture this information? (Y/N)	² If Yes, is this a codifiable field? (Y/N)	Can your EHR calculate this element/measure? (Y/N)	If not, why not? For example, would modifications to the EHR or office workflow be needed? (Type your comments below)
A = Site A response; C = Site C response								
Age	Individual characteristic	Patient characteristics	ICD-9: A HL7: C	EHR (Query Pt Birthdays): A Administrative sheet: C	Yes: A, C	Yes: A, C	Yes: A, C	
Confirm Diagnosis of Diabetes	Condition/diagnosis/ problem	Diagnosis, active/inactive	ICD-9: A, C	Office progress note: A, C Problem/Diagnosis list: A, C	Yes: A, C	Yes: A, C	Yes: A, C	
<u>Bilateral Amp. of the Feet</u>	Condition/diagnosis/ problem	Diagnosis, active/inactive	ICD-9: A, C	Office progress note: A, C Problem/Diagnosis list: C	Yes: A, C	Yes: A, C	Yes: A, C	
Peripheral Neuropathy – Neurological Evaluation	Physical Exam	Physical Exam, finding	G8404: A Text: C	Office progress note: A, C Created by G8404: A	Yes: A, C	Yes: A, C	Yes: A, C	
Medical Reason for Not Performing Neurological Evaluation	Physical Exam	Physical Exam, finding	G-code: A Text: C	Office progress note: A, C G-code but all get exam: A	Yes: A No: C	Yes: A No: C	Yes: A No: C	
Patient Reason for Not Performing Neurological Evaluation	Physical Exam	Physical Exam, finding	Not applicable: A Text: C	Not available: A Office progress note: C	No: A, C	No: A, C	No: A, C	

Can your EHR calculate this measure?		Yes: A	No: C (Modifications would be needed to the EHR)
Do Scores Obtained from Measure as Specified Accurately Differentiate Quality of Performance Across Providers (Face Validity)?	A: These are provider compliance measures, yet are performed on a vast majority of these patients.	C: I believe that a Neurological Evaluation is a very good way for ulcer prevention. Poor sensation can lead to a patient developing a sore and not knowing it which could lead to the development of an ulcer on the foot. The only time that I would not evaluate the patients neurological nature is if the patient was a bilateral amputee which is covered in the measure or if the patient has already been diagnosed with Neuropathy.	

Appendix VIII – Eligible Criteria Elements - Percentage of Time Where Data Was Found by the Abstractors

Data Element Variable	Location of Information at Site	Site A	Site B	Site C
Age				
	Administrative sheet		4%	100%
	Visit Note	100%	46%	
	H&P		36%	
	Annual Comprehensive Diabetes Foot Exam Form		4%	
	New Patient Evaluation		2%	
	Consultation		5%	
	Endocrinology - Consultation		1%	
	Insurance		1%	
	Medication list		1%	
Confirm Diagnosis of Diabetes				
	Consultation	1%	6%	
	Visit Note	98%	92%	98%
	H&P		2%	
	Medication list		1%	
	Annual Comprehensive Diabetes Foot Exam Form	1%		1%
	Problem Diagnosis List			1%
Confirmation of NO Bilateral Amputation				
	Visit Note	39%	94%	100%
	Not available	3%		
	Not recorded by auditor	58%		
	Consultation		6%	

Appendix IX – Evaluation of Footwear - Percentage of Time Where Data Was Found by the Abstractors

Data Element Variable	Location of Information at Site	Site A	Site B	Site C
Evaluation of Footwear	Visit Note	97%	79%	100%
	Not available	3%	17%	
	Annual Comprehensive Diabetes Foot Exam Form		4%	

Appendix X – Neurological Evaluation - Percentage of Time Where Data Was Found by the Abstractors

Data Element Variable	Location of Information at Site	Site A	Site B	Site C
Neurological Evaluation	Visit Note	100%	98%	100%
	Not available		1%	
	Consultation		1%	