

Diabetic Foot & Ankle Care, Peripheral Neuropathy - Neurological Evaluation (NQF 0417)

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|--|--|---------------------------|---|
| EMeasure Name | Diabetic Foot & Ankle Care, Peripheral Neuropathy - Neurological Evaluation (NQF 0417) | EMeasure Id | 1EAC3A7B-86CC-4F56-8B27-8D679DD1451C |
| Version number | 1 | Set Id | 1677DD02-1AE2-4803-B32E-1EF8B4F23523 |
| Available Date | No information | Measurement Period | January 1, 20xx through December 31, 20xx |
| Status | completed | | |
| Author | Iowa Foundation for Medical Care | | |
| Measure Steward | American Podiatric Medical Association | | |
| Endorsed by | National Quality Forum | | |
| Description | Percentage of patients aged 18 years and older with a diagnosis of diabetes mellitus who had a neurological examination of their lower extremities during one or more office visits within 12 months. | | |
| Copyright | | | |
| Measure scoring | Proportion | | |
| Measure type | Process | | |
| Stratification | None | | ^ |
| Risk Adjustment | None | | ^ |
| Data Aggregation | | | |
| Rationale | Foot ulceration is the most common single precursor to lower extremity amputations among persons with diabetes. Treatment of infected foot wounds accounts for up to one-quarter of all inpatient hospital admissions for people with diabetes in the United States. Peripheral sensory neuropathy in the absence of perceived trauma is the primary factor leading to diabetic foot ulcerations. Approximately 45-60% of all diabetic ulcerations are purely neuropathic. Other forms of neuropathy may also play a role in foot ulcerations. Motor neuropathy resulting in anterior crural muscle atrophy or intrinsic muscle wasting can lead to foot deformities such as foot drop, equinus, and hammertoes. In people with diabetes, 22.8% have foot problems – such as amputations and numbness – compared with 10% of nondiabetics. Over the age of 40 years old, 30% of people with diabetes have loss of sensation in their feet. | | |
| Clinical Recommendation Statement | Recognizing important risk factors and making a logical, treatment-oriented assessment of the diabetic foot requires consistent and thorough diagnostic approach using a common language. Without such a method, the practitioner is more likely to overlook vital information and to pay inordinate attention to less critical points in the evaluation. A useful examination will involve identification of key risk factors and assignment into appropriate risk category. Only then can an effective treatment plan be designed and implemented. (ACFAS/ACFAOM Clinical Practice Guidelines) | | |
| Improvement notation | Higher score indicates better quality | | ^ |
| Measurement duration | 12 month(s) | | ^ |
| Reference | Frykberg, RG; Armstrong, DG; Giurini, J; Edwards, A; Kravette, M; Kravitz, S; Ross, C; Stavosky, J; Stuck, R; and Vanore, J; Diabetic Foot Disorders: A Clinical Practice Guideline. Supplement to JFAS, 2000. | | |
| Reference | Boulton AJM. Comprehensive Risk Examination and Foot Assessment. Diabetes Care. August 2008 31(8):1679-1685. | | |
| Definition | | | |
| Guidance | At least two of the five components of the lower extremity neurological exam (reflexes, vibratory, proprioception, sharp/dull, and 5.07 filament detection) must be documented in order to meet the numerator requirements. | | |
| | Categorization System: - Risk Category: 0 Risk Profile: Normal Evaluation Frequency: Annual - Risk Category: 1 Risk Profile: Peripheral Neuropathy (LOPS) Evaluation Frequency: Semi-Annual - Risk Category: 2 Risk Profile: Neuropathy, deformity, and/or PAD Evaluation Frequency: Quarterly - Risk Category: 3 | | |

Risk Profile: Previous ulcer or amputation
Evaluation Frequency: Monthly to quarterly



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Population criteria

- **Initial Patient Population =**
 - AND: "Patient characteristic: birth date" >= 18 year(s) starts before start of
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement" during "Measurement Period"
 - AND: "Diagnosis active: Diabetes" starts before or during
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement" during "Measurement Period"
- **Denominator=**
 - AND: "Initial Patient Population"
 - AND NOT:
 - AND:
 - OR: "Diagnosis active: Bilateral Amputee" starts before start of
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement" during "Measurement Period"
 - OR:
 - AND: "Physical exam finding not done: Patient Reason" for "Vibratory Sense Finding SNOMED-CT Code List"
 - AND: "Physical exam finding not done: Patient Reason" for "Patellar or Achilles Reflex Finding SNOMED-CT Code List"
 - AND: "Physical exam finding not done: Patient Reason" for "Proprioception Finding SNOMED-CT Code List"
 - AND: "Physical exam finding not done: Patient Reason" for "Sharp/Dull Sensation Finding SNOMED-CT Code List"
 - AND: "Physical exam finding not done: Patient Reason" for "Monofilament Detection Finding SNOMED-CT Code List"
 - during
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement" during "Measurement Period"
- **Numerator =**
 - OR:
 - AND:
 - OR: "Diagnosis active: Left Foot Amputee"
 - OR: "Diagnosis active: Left Lower Limb Amputee"
 - OR: "Diagnosis active: Lower Limb Amputee (laterality: 'left')"
 - starts before start of
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement" during "Measurement Period"
 - AND:
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'right foot')"
 - OR:

- AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'right foot')"
 - during
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement"
 - during "Measurement Period"
- OR:
 - AND:
 - OR: "Diagnosis active: Right Foot Amputee"
 - OR: "Diagnosis active: Right Lower Limb Amputee"
 - OR: "Diagnosis active: Lower Limb Amputee (laterality: 'right')"
 - starts before start of
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement"
 - during "Measurement Period"
 - AND:
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'left foot')"

- AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'left foot')"
 - during
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement"
 - during "Measurement Period"
- OR:
 - AND:
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'right foot')"
 - OR:
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'right foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'right foot')"
 - AND:
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Vibratory Sense Finding (anatomical location: 'left foot')"

- AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Patellar or Achilles Reflex Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Proprioception Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'left foot')"
 - OR:
 - AND: "Physical exam finding: Sharp/Dull Sensation Finding (anatomical location: 'left foot')"
 - AND: "Physical exam finding: Monofilament Detection Finding (anatomical location: 'left foot')"
 - during
 - OR: "Encounter: Inpatient or Ambulatory"
 - OR: "Procedure performed: skin or nail trim or debridement"
 - during "Measurement Period"
- **Exclusions =**
 - None

Data criteria (QDS Data Elements)

- "Diagnosis active: Bilateral Amputee" using "Bilateral Amputee ICD-10-CM Code List (2.16.840.1.113883.3.67.1.101.1.143)"
- "Diagnosis active: Diabetes" using "Diabetes Code List GROUPING (2.16.840.1.113883.3.67.1.101.1.393)"
- "Diagnosis active: Left Foot Amputee" using "Left Foot Amputee ICD-10-CM Code List (2.16.840.1.113883.3.67.1.101.1.144)"
- "Diagnosis active: Left Lower Limb Amputee" using "Left Lower Limb Amputee Code List GROUPING (2.16.840.1.113883.3.67.1.101.1.146)"
- "Diagnosis active: Lower Limb Amputee" using "Lower Limb Amputee SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.152)"
- "Diagnosis active: Right Foot Amputee" using "Right Foot Amputee ICD-10-CM Code List (2.16.840.1.113883.3.67.1.101.1.145)"
- "Diagnosis active: Right Lower Limb Amputee" using "Right Lower Limb Amputee Code List GROUPING (2.16.840.1.113883.3.67.1.101.1.149)"
- "Encounter: Inpatient or Ambulatory" using "Inpatient or Ambulatory Code List GROUPING (2.16.840.1.113883.3.67.1.101.1.133)"
- "Patient characteristic: birth date" using "birth date HL7 Code List (2.16.840.1.113883.3.67.1.101.1.24)"
- "Physical exam finding: Monofilament Detection Finding" using "Monofilament Detection Finding SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.407)"
- "Physical exam finding: Patellar or Achilles Reflex Finding" using "Patellar or Achilles Reflex Finding SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.404)"
- "Physical exam finding: Proprioception Finding" using "Proprioception Finding SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.405)"
- "Physical exam finding: Sharp/Dull Sensation Finding" using "Sharp/Dull Sensation Finding SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.406)"
- "Physical exam finding: Vibratory Sense Finding" using "Vibratory Sense Finding SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.403)"
- "Physical exam finding not done: Patient Reason" using "Patient Reason Code List GROUPING (2.16.840.1.113883.3.67.1.101.1.411)"
- "Procedure performed: skin or nail trim or debridement" using "skin or nail trim or debridement Code List GROUPING (2.16.840.1.113883.3.67.1.101.1.394)"
- Attribute: "Laterality: Left" using "Left SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.8901)"
- Attribute: "Laterality: Right" using "Right SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.8902)"
- Attribute: "Anatomical location: Left foot" using "Left foot SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.8903)"
- Attribute: "Anatomical location: Right foot" using "Right foot SNOMED-CT Code List (2.16.840.1.113883.3.67.1.101.1.8904)"

Summary Calculation

Calculation is generic to all measures:

- Calculate the final denominator by adding all that meet denominator criteria.
 - Subtract from the final denominator all that do not meet numerator criteria yet also meet exclusion criteria. Note some measures do not have exclusion criteria.
 - The performance calculation is based on the "Measure scoring" from header information above:
 - For "Proportion" measures, the calculation is the number meeting numerator criteria divided by the final denominator.
 - For "Ratio" and "Continuous Variable" measures, follow the calculation instructions in the Data Aggregation header information above, if present.
 - For measures with multiple denominators, repeat this process for each denominator and report each result separately.
 - For measures with multiple patient populations, repeat this process for each patient population and report each result separately.
 - For measures with multiple numerators, calculate each numerator separately within each population using the paired exclusion.
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