

American Society of Plastic Surgeons (ASPS)/
Physician Consortium for Performance Improvement® (PCPI)/
National Committee for Quality Assurance

Chronic Wound Care *Physician Performance Measurement Set*

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Purpose of Measures:

These clinical performance measures, developed by the American Society of Plastic Surgeons, the Physician Consortium for Performance Improvement® (PCPI), and the National Committee for Quality Assurance, are designed for individual quality improvement. Unless otherwise indicated, the measures are also appropriate for accountability if appropriate methodological, statistical, and implementation rules are achieved.

Accountability Measures:

Measure #1: Use of wound surface culture technique in patients with chronic skin ulcers (overuse measure)

Measure #2: Use of wet to dry dressings in patients with chronic skin ulcers (overuse measure)

Measure #3: Assessment of wound characteristics in patients undergoing debridement

Measure #4: Use of compression system in patients with venous ulcers

Measure #5: Patient education regarding long term compression therapy

Measure #6: Offloading (pressure relief) of diabetic foot ulcers

Measure #7: Patient education regarding diabetic foot care

Intended Audience and Patient Population:

These measures are designed for use by physicians and for calculating reporting or performance measurement at the individual physician level. When existing hospital-level or plan-level measures are available for the same measurement topics, the PCPI attempts to harmonize the measures to the extent feasible.

Measures 1 through 3 are designed for any physician caring for patients aged 18 years and older with a diagnosis of chronic skin ulcer.

Measures 4 and 5 are designed for any physician caring for patients aged 18 years and older with a diagnosis of venous ulcer.

Measures 6 and 7 are designed for any physician caring for patients aged 18 years and older with a diagnosis of diabetic foot ulcer.

The PCPI also encourages the use of these measures by eligible health professionals, where appropriate.

Measure Specifications

The PCPI seeks to specify measures for implementation using multiple data sources, including paper medical record, administrative (claims) data, and particular emphasis on Electronic Health Record Systems (EHRS). Specifications to report on these measures for Chronic Wound Care using administrative (claims) data are included in this document. We have identified codes for these measures, including ICD-9 and CPT (Evaluation & Management Codes, Category I and where Category II codes would apply). Specifications for additional data sources, including EHRS, will be fully developed at a later date.

Measure Exclusions:

For process measures, the PCPI provides three categories of reasons for which a patient may be excluded from the denominator of an individual measure:

- Medical reasons

Includes:

- not indicated (absence of organ/limb, already received/performed, other)
- contraindicated (patient allergic history, potential adverse drug interaction, other)

- Patient reasons

Includes:

- patient declined
- social or religious reasons
- other patient reasons

- System reasons

Includes:

- resources to perform the services not available
- insurance coverage/payor-related limitations
- other reasons attributable to health care delivery system

These measure exclusion categories are not available uniformly across all measures; for each measure, there must be a clear rationale to permit an exclusion for a medical, patient, or system reason. The exclusion of a patient may be reported by appending the appropriate modifier to the CPT Category II code designated for the measure:

- Medical reasons: modifier 1P
- Patient reasons: modifier 2P
- System reasons: modifier 3P

Although this methodology does not require the external reporting of more detailed exclusion data, the PCPI recommends that physicians document the *specific* reasons for exclusion in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exclusions data to identify practice patterns and opportunities for quality improvement. For example, it is possible for implementers to calculate the percentage of patients that physicians have identified as meeting the criteria for exclusion.

Please refer to documentation for each individual measure for information on the acceptable exclusion categories and the codes and modifiers to be used for reporting.

Measures #1-7 in the Chronic Wound Care measurement set are process measures.

For outcome measures, the PCPI specifically identifies all acceptable reasons for which a patient may be excluded from the denominator. Each specified reason is reportable with a CPT Category II code designated for that purpose.

There are no outcome measures in the Chronic Wound Care measurement set.

The PCPI continues to evaluate and likely will evolve its methodology for handling exclusions as it gains experience in the use of the measures. The PCPI welcomes comments on its exclusions methodology.

Data Capture and Measure Calculation

The PCPI intends for physicians to collect data on each patient eligible for a measure. Feedback on measures should be available to physicians by patient to facilitate patient management and in aggregate to identify opportunities for improvement across a physician's patient population.

Measure calculations will differ depending on whether a rate is being calculated for performance or reporting purposes.

The method of calculation for performance follows these steps: first, identify the patients who meet the eligibility criteria for the denominator (PD); second, identify which of those patients meet the numerator criteria (A); and third, for those patients who do not meet the numerator criteria, determine whether an appropriate exclusion applies and subtract those patients from the denominator (C). (see examples below)

The methodology also enables implementers to calculate the rates of exclusions and to further analyze both low and high rates, as appropriate (see examples below).

The method of calculation for reporting differs. One program which currently focuses on reporting rates is the Centers for Medicare and Medicaid Services (CMS) Physician Quality Reporting Initiative (PQRI). Currently, under that program design, there will be a reporting denominator determined solely from claims data (CPT and ICD-9), which in some cases result in a reporting denominator that is much larger than the eligible population for the performance denominator. Additional components of the reporting denominator are explained below.

The components that make up the numerator for reporting include all patients from the eligible population for which the physician has reported, including: the number of patients who meet the numerator criteria (A), the number of patients for whom valid exclusions apply (C) and also the number of patients who do not meet the numerator criteria (D). These components, where

applicable, are summed together to make up the inclusive reporting numerator. The calculation for reporting will be the reporting numerator divided by the reporting denominator. (see examples below).

Examples of calculations for reporting and performance are provided for each measure.

Calculation for Performance

For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.

Numerator (A) Includes:

Number of patients meeting numerator criteria

Performance Denominator (PD) Includes:

Number of patients meeting criteria for denominator inclusion

Denominator Exclusions (C) Include:

Number of patients with valid medical, patient or system exclusions (where applicable; will differ by measure)

Performance Calculation

$$\frac{A \text{ (# of patients meeting numerator criteria)}}{PD \text{ (# patients in denominator)} - C \text{ (# patients with valid denominator exclusions)}}$$

It is also possible to calculate the percentage of patients excluded overall, or excluded by medical, patient, or system reason where applicable:

Overall Exclusion Calculation

$$\frac{C \text{ (# of patients with any valid exclusion)}}{PD \text{ (# patients in denominator)}}$$

OR

Exclusion Calculation by Type

$$\frac{C_1 \text{ (# patients with medical reason)}}{PD \text{ (# patients in denominator)}}$$

$$\frac{C_2 \text{ (# patients with patient reason)}}{PD \text{ (# patients in denominator)}}$$

$$\frac{C_3 \text{ (# patients with system reason)}}{PD \text{ (# patients in denominator)}}$$

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator

Reporting Numerator includes each of the following components, where applicable. (There may be instances where there are no patients to include in A, C, D, or E).

A. Number of patients meeting additional denominator criteria (for measures where true denominator cannot be determined through ICD-9 and CPT Category I coding alone) AND numerator criteria

C. Number of patients with valid medical, patient or system exclusions (where applicable; will differ by measure)

D. Number of patients not meeting numerator criteria and without a valid exclusion

E. All other patients not meeting additional denominator criteria (for measures where true denominator cannot be determined through ICD-9 and CPT Category I coding alone)

Reporting Denominator (RD) Includes:

RD. Denominator criteria (identifiable through ICD-9 and CPT Category I coding)

Reporting Calculation

$$\frac{A(\text{\# of patients meeting additional denominator criteria AND numerator criteria}) + C(\text{\# of patients with valid exclusions}) + D(\text{\# of patients NOT meeting numerator criteria}) + E(\text{\# of patients not meeting additional denominator criteria})}{\text{RD (\# of patients in denominator)}}$$

RD (# of patients in denominator)

Chronic Wound Care

Measure #1: Use of wound surface culture technique in patients with chronic skin ulcers (overuse measure)

This measure may be used as an Accountability measure

Clinical Performance Measure
<p>Numerator: Patient visits <u>without</u> the use of a wound surface culture technique*</p> <p><i>* The numerator will also be met if there is documentation that a technique other than surface culture of the wound exudate has been used to acquire the wound culture (eg, Levine/deep swab technique¹, semi-quantitative or quantitative swab technique).</i></p> <p>Denominator: All patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer</p> <p>Denominator Exclusions: Documentation of medical reason(s) for using a wound surface culture technique [eg, surface culture for methicillin-resistant staphylococcus aureus (MRSA) screening]</p> <p>Measure: Percentage of patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer <u>without</u> the use of a wound surface culture technique</p>
<p>The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure:</p> <p>Avoid swabbing undebried ulcers or wound drainage. If swabbing the debried wound base is the only available culture option, use a swab designed for culturing aerobic and anaerobic organisms and rapidly transport it to the laboratory (B-I). (Lipsky et al., IDSA, 2004²)</p> <p>...determine the type and level of infection in the debried ulcer by tissue biopsy or by a validated quantitative swab technique. (Level II) (WHS, 2006^{3,4,5})</p> <p>[Q]uantitative culture has been shown to have high predictive value, sensitivity, and specificity. Most authors recommend the following technique for acquiring high quality wound cultures: After skin disinfection, a strip of necrotic wound tissue weighing 0.1 to 0.5 gram is excised for quantitative culture. This specimen is placed in an aerobic/anaerobic culture medium. Simultaneously, routine cotton swab is taken from the site of excision-debridement, taking care to avoid the ulcer's surface. It may occasionally be necessary to biopsy the ulcer in order to rule out [the] uncommon causes of lower extremity ulcers. (ASPS, 2007⁶)</p> <p>...swab specimens collected from wounds using Levine's technique performed better than swab specimens collected using either the wound exudate or Z-technique. Equally important, the findings suggest that swab specimens obtained using Levine's technique and processed using quantitative laboratory procedures are acceptably accurate when compared with the quantitative cultures of wound tissue. ...swab specimens obtained with Levine's technique will enable a wider variety of wounds to be monitored for wound bioburden than tissue cultures. In addition, Levine's technique will be much more practical for repeating cultures in suspicious wounds that produce negative findings initially than tissue cultures. (Gardner et al., 2006⁷)</p>
<p>Rationale for the measure: Infections are a potential complication in any patient with a chronic wound. Accurately determining the pathogenic cause of these clinically diagnosed infections has important implications in determining appropriate treatment regimens and minimizing</p>

patient complications. Surface swab cultures are inaccurate and unreliable for obtaining specimens for culture. A surface swab of an unprepared wound bed will not necessarily reveal the organism that resides within the tissue but rather only the surface contaminants. A basic tenet of infection within a chronic wound is that the organism must reside in living tissue. Swab culture of the surface may not reveal this in the presence of significant necrotic tissue or exudate. A recent survey of wound care practitioners in the US found that 54% of respondents routinely collect a swab culture while another 42% routinely collect both swab and biopsy specimens depending on the nature of the wound. More importantly, the study demonstrated considerable variability in the type of swab culture commonly obtained - including surface, deep swab and quantitative techniques.⁸ Despite their limited utility and the proven efficacy of quantitative swab and other techniques, surface cultures remain a common method for identifying chronic wound infection. The principle here is to avoid swabbing the unprepared wound exudate. Preparation of the wound with physiologic solution and removal of loose tissue matter prior to obtaining the wound culture will not impede the diagnosis of an offending organism, rather it will lessen the probability of identifying and treating a surface contaminant that will not impact progression to healing. In other words, no information is lost by wound bed preparation prior to swab or tissue biopsy technique culture. The goal is to obtain tissue microorganisms from the viable deeper tissue plane.

Data capture and calculations:

Calculation for Performance

For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions. *A higher score indicates appropriate treatment of patients with chronic skin ulcer (e.g., the proportion of patient visits without the use of a wound surface culture technique).*

Performance Numerator (A) Includes:

- Patient visits without the use of a wound surface culture technique

Performance Denominator (PD) Includes:

- All patient visits for those patients aged 18 years and older

AND

- Diagnosis of chronic skin ulcer

Performance Denominator Exclusions (C) Include:

- Documentation of medical reason(s) for using a wound surface culture technique [eg, surface culture for methicillin-resistant staphylococcus aureus (MRSA) screening]

Performance Calculation

$\frac{A \text{ (\# of patient visits meeting measure criteria)}}{PD \text{ (\# of patient visits in denominator)} - C \text{ (\# of patient visits with valid denominator exclusions)}}$

Components for this measure are defined as:

A	# of patient visits <u>without</u> the use of a wound surface culture technique
C	# of patient visits with documented medical reason(s) for using a wound surface culture technique (eg, surface culture for MRSA screening)
PD	# of patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator

Reporting Numerator includes each of the following instances:

A. Patient visits without the use of a wound surface culture technique

C. Patient visits with the use of a wound surface culture technique and there is a documented medical reason (eg, surface culture for MRSA screening) for doing so

D. Patient visits with the use of a wound surface culture technique and there is no documented reason for doing so

Reporting Denominator (RD) Includes:

- All patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer

Reporting Calculation

$$\frac{A(\text{\# of patient visits meeting numerator criteria}) + C(\text{\# of patient visits with valid exclusions}) + D(\text{\# of patient visits NOT meeting numerator criteria})}{RD (\text{\# of patient visits in denominator})}$$

Components for this measure are defined as:

A	# of patient visits without the use of a wound surface culture technique
C	# of patient visits <u>with</u> the use of a wound surface culture technique and there is a documented medical reason (eg, surface culture for MRSA screening) for doing so
D	# of patient visits <u>with</u> the use of a wound surface culture technique and there is no documented reason for doing so
RD	# of patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer

Measure Specifications – *Measure #1: Use of wound surface culture technique in patients with chronic skin ulcers (overuse measure)*

Measure specifications for data sources other than administrative claims will be developed at a later date.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria.

(Note: The specifications listed below are those needed for performance calculation.)

Denominator (Eligible Population): All patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer

- CPT® Service Codes: 97001, 97002, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245

AND

- ICD-9 diagnosis codes: 707.00, 707.01, 707.02, 707.03, 707.04, 707.05, 707.06, 707.07, 707.09, 707.10, 707.11, 707.12, 707.13, 707.14, 707.15, 707.19, 707.8, 707.9

Numerator: Patient visits without the use of a wound surface culture technique

- Report the CPT Category II code 4260F- Wound surface culture technique used

OR

- Report the CPT Category II code 4261F-Technique other than surface culture of the wound exudate used (eg, Levine/deep swab technique, semi-quantitative or quantitative swab technique) OR wound surface culture technique not used

Denominator Exclusion: Documentation of medical reason(s) for using a wound surface culture technique [eg, surface culture for methicillin-resistant staphylococcus aureus (MRSA) screening]

- Append modifier to CPT Category II code: 4260F-1P

B. Electronic Health Record System (*in development*)

C. Paper Medical Record (*in development*)

Chronic Wound Care

Measure #2: Use of wet to dry dressings in patients with chronic skin ulcers (overuse measure)

This measure may be used as an Accountability measure

Clinical Performance Measure
<p>Numerator: Patient visits <u>without</u> a prescription or recommendation to use wet to dry dressings</p> <p>Denominator: All patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer</p> <p>Denominator exclusions: Documentation of medical reason(s) for prescribing/recommending the use of wet to dry dressings (eg, presence of necrotic tissue requiring debridement, highly exudative wound that is unlikely to dry out between dressing changes)</p> <p>Measure: Percentage of patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer <u>without</u> a prescription or recommendation to use wet to dry dressings</p>
<p>The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure:</p> <p>Use clinical judgment to select a wound dressing that facilitates continued moisture. (Level I) Wet-to-dry dressings are not considered continuously moist. Continuously moist saline gauze dressings are as effective as other types of moist wound healing in terms of healing rate, although they may have other drawbacks such as maceration of the peri-ulcer skin, practicality of use, and cost effectiveness. It can also be very difficult, practically, to keep gauze dressings continuously moist. (WHS, 2006^{3,4,5})</p> <p>Maintain moist environment</p> <ul style="list-style-type: none">• Remove soluble factors detrimental to wound healing• Use appropriate dressings (available evidence shows no superiority in dressing materials)• Consider classic dressings (gauze, foam, hydrocolloid, hydrogels)• Consider bioactive dressings (Grade B) (ASPS, 2007⁶)
<p>Rationale for the measure: A moist wound environment is essential to accelerate wound healing. Nevertheless, "wet to dry and gauze dressings are the most widely used primary dressing material in the United States" and evidence suggests that they are used inappropriately.⁹ In a recent study examining wound care practices, the use of dressings to maintain moist wound conditions ranged from 41.7% to 58.5% for diabetic and venous ulcers, respectively.¹⁰ Wet-to-dry dressings should not be utilized in the care of patients with chronic wounds as they may actually impede healing and are associated with an increased risk of infection, prolonged inflammation, and increased patient discomfort.</p>

Data capture and calculations:

Calculation for Performance

For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions. *A higher score indicates appropriate treatment of patients with chronic skin ulcer (e.g., the proportion of patient visits without a prescription or recommendation to use wet to dry dressings).*

Performance Numerator (A) Includes:

- Patient visits without a prescription or recommendation to use wet to dry dressings

Performance Denominator (PD) Includes:

- All patient visits for those patients aged 18 years and older
AND
- Diagnosis of chronic skin ulcer

Performance Denominator Exclusions (C) Include:

- Documentation of medical reason(s) for prescribing/recommending the use of wet to dry dressings (eg, presence of necrotic tissue requiring debridement, highly exudative wound that is unlikely to dry out between dressing changes)

Performance Calculation

$$\frac{\text{A (\# of patient visits meeting measure criteria)}}{\text{PD (\# of patient visits in denominator) - C (\# of patient visits with valid denominator exclusions)}}$$

Components for this measure are defined as:

A	# of patient visits without a prescription or recommendation to use wet to dry dressings
C	# of patients with documented medical reason(s) for prescribing/recommending the use of wet to dry dressings (eg, presence of necrotic tissue requiring debridement, highly exudative wound that is unlikely to dry out between dressing changes)
PD	# of patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator

Reporting Numerator includes each of the following instances:

- A. Patient visits without a prescription or recommendation to use wet to dry dressings
- C. Patient visits with a prescription or recommendation to use wet to dry dressings and there is a documented medical reason (eg, presence of necrotic tissue requiring debridement, highly exudative wound that is unlikely to dry out between dressing changes) for doing so
- D. Patient visits with a prescription or recommendation to use wet to dry dressings and there is no documented reason for doing so

Reporting Denominator (RD) Includes:

- All patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer

Reporting Calculation

$$\frac{A(\text{\# of patient visits meeting numerator criteria}) + C(\text{\# of patient visits with valid exclusions}) + D(\text{\# of patient visits NOT meeting numerator criteria})}{RD(\text{\# of patient visits in denominator})}$$

Components for this measure are defined as:

A	# of patient visits without a prescription or recommendation to use wet to dry dressings
C	# of patient visits with a prescription or recommendation to use wet to dry dressings and there is a documented medical reason (eg, presence of necrotic tissue requiring debridement, highly exudative wound that is unlikely to dry out between dressing changes) for doing so
D	# of patient visits with a prescription or recommendation to use wet to dry dressings and there is no documented reason for doing so
RD	# of patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer

Measure Specifications – *Measure #2: Use of wet to dry dressings in patients with chronic skin ulcers (overuse measure)*
Measure specifications for data sources other than administrative claims will be developed at a later date.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria.

(Note: The specifications listed below are those needed for performance calculation.)

Denominator (Eligible Population): All patient visits for those patients aged 18 years and older with a diagnosis of chronic skin ulcer

- CPT® E/M Service Codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245

AND

- ICD-9 diagnosis codes: 707.00, 707.01, 707.02, 707.03, 707.04, 707.05, 707.06, 707.07, 707.09, 707.10, 707.11, 707.12, 707.13, 707.14, 707.15, 707.19, 707.8, 707.9

Numerator: Patient visits without a prescription or recommendation to use wet to dry dressings

- Report the CPT Category II code 4265F- Use of wet to dry dressings prescribed or recommended

OR

- Report the CPT II Category code 4266F- Use of wet to dry dressings neither prescribed nor recommended

Denominator Exclusion: Documentation of medical reason(s) for prescribing/recommending the use of wet to dry dressings (eg, presence of necrotic tissue requiring debridement, highly exudative wound that is unlikely to dry out between dressing changes)

- Append modifier to CPT Category II code: 4165F-1P

B. Electronic Health Record System *(in development)*

C. Paper Medical Record *(in development)*

Chronic Wound Care

Measure #3: Assessment of wound characteristics in patients undergoing debridement

This measure may be used as an Accountability measure

Clinical Performance Measure
<p>Numerator: Patients with documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement</p> <p>Denominator All patients aged 18 years and older with a diagnosis of chronic skin ulcer undergoing debridement</p> <p>Denominator Exclusions: None</p> <p>Measure: Percentage of patients aged 18 years and older with a diagnosis of chronic skin ulcer undergoing debridement with documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement</p>
<p>The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure:</p> <p>Document characteristics of the wound:</p> <ul style="list-style-type: none">• Size• Nature of wound base tissue• Amount of drainage (Grade B) (ASPS, 2007⁶) <p>There should be an ongoing and consistent documentation of wound history, recurrence, and characteristics (location, size, base, exudates, condition of the surrounding skin, staging, and pain) to evaluate wound bed preparation. The rate of wound healing should be evaluated to determine whether treatment is optimal. (Level I) (WHS, 2006^{3,4,5})</p>
<p>Rationale for the measure:</p> <p>With the increasing costs and services associated with debridement and the potential overuse of these procedures, documenting the wound characteristics prior to debridement is important to confirm the medical necessity of the procedure. A review of surgical debridement services billed to Medicare in 2004, by the Office of the Inspector General, found that 29% of services had no documentation or insufficient documentation to determine whether the services were medically necessary or were coded accurately.¹¹ Another important purpose of assessing and documenting the characteristics of the wound is to monitor wound progress and subsequently evaluate the treatment regimen and make any necessary adjustments.</p>
<p>Data capture and calculations:</p> <p><u>Calculation for Performance</u></p> <p>For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.</p> <p>Performance Numerator (A) Includes:</p> <ul style="list-style-type: none">• Patients with documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement <p>Performance Denominator (PD) Includes:</p> <ul style="list-style-type: none">• All patients aged 18 years and olderAND• Diagnosis of chronic skin ulcer

AND

- Undergoing debridement

Performance Calculation

$$\frac{A \text{ (\# of patients meeting measure criteria)}}{PD \text{ (\# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients with documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement
PD	# of patients aged 18 years and older with a diagnosis of chronic skin ulcer undergoing debridement

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator.

Reporting Numerator includes each of the following instances:

A. Patients with documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement

D. Patients with no documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement

Reporting Denominator (RD) Includes:

- All patients aged 18 years and older with a diagnosis of chronic skin ulcer undergoing debridement

Reporting Calculation

$$\frac{A(\text{\# of patients meeting numerator criteria}) + D(\text{\# of patients NOT meeting numerator criteria})}{RD \text{ (\# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients with documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement
D	# of patients with <u>no</u> documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement
RD	# of patients aged 18 years and older with a diagnosis of chronic skin ulcer undergoing debridement

Measure Specifications – *Measure #3: Assessment of wound characteristics in patients undergoing debridement*
Measure specifications for data sources other than administrative claims will be developed at a later date.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper).

(Note: The specifications listed below are those needed for performance calculation.)

Denominator (Eligible Population): All patients aged 18 years and older with a diagnosis of chronic skin ulcer undergoing debridement

- CPT® Procedure Codes: 11040, 11041, 11042, 11043, 11044, 15002, 15003, 15004, 15005, 97597, 97598
AND
- ICD-9 diagnosis codes: 707.00, 707.01, 707.02, 707.03, 707.04, 707.05, 707.06, 707.07, 707.09, 707.10, 707.11, 707.12, 707.13, 707.14, 707.15, 707.19, 707.8, 707.9

Numerator: Patients with documentation of wound characteristics (including at a minimum: size, AND nature of wound base tissue, AND amount of drainage) prior to debridement

- Report the CPT Category II code 2050F-Wound characteristics including size AND nature of wound base tissue AND amount of drainage prior to debridement, documented

Denominator Exclusion: *None*

B. Electronic Health Record System (*in development*)

C. Paper Medical Record (*in development*)

Chronic Wound Care

Measure #4: Use of compression system in patients with venous ulcers

This measure may be used as an Accountability measure

Clinical Performance Measure
<p>Numerator: Patients who were prescribed compression therapy within the 12 month reporting period</p> <p>Denominator: All patients aged 18 years and older with a diagnosis of venous ulcer</p> <p>Denominator Exclusions: Documentation of medical reason(s) for not prescribing compression therapy (eg, severe arterial occlusive disease) Documentation of patient reason(s) for not prescribing compression therapy Documentation of system reason(s) for not prescribing compression therapy</p> <p>Measure: Percentage of patients aged 18 years and older with a diagnosis of venous ulcer who were prescribed compression therapy within the 12 month reporting period</p>
<p>The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure:</p> <p>For patients with venous hypertension or risk for venous insufficiency, consider graduated compression stockings. (Grade B) (ASPS, 2007⁶)</p> <p>The use of a Class 3 (most supportive) high-compression system (three layer, four layer, short stretch, paste-containing bandages, e.g., Unna's boot, Duke boot) is indicated in the treatment of venous ulcers. Although these modalities are similar in effectiveness, they can differ significantly in comfort and cost. The degree of compression must be modified when mixed venous/arterial disease is confirmed during the diagnostic work-up. Intermittent pneumatic pressure (IPC) can be used with or without compression dressings and can provide another option in patients who cannot or will not use an adequate compression dressing system. (Level I) (WHS, 2006³)</p> <p>Compression therapy heals more venous leg ulcers than no compression therapy as well as decreases the healing time. High compression is more effective than low compression, but there are no differences in the effectiveness of the different types of products available for high compression. (Level A) (WOCN, 2005¹²)</p> <p><u>Compression options</u></p> <ul style="list-style-type: none">• Elastic compression bandage heals more than inelastic compression (Grade A)• Multi-layer (2, 3, or 4 layers) sustained, elastic high-compression bandage (Grade A)• Elastic high-compression stockings to heal venous ulcers (Grade A)• Elastic multiple-layer high-compression stockings to heal venous ulcers (Grade A)• Duke Boot or Unna Boot + elastic compression (Grade A)• Gradient compression better than uniform compression (Grade C)• Short stretch bandage (Grade A)• Unna boot zinc paste impregnated bandage (Grade A)• Intermittent pneumatic compression (Grade A)• Non-elastic compression with Circaid [or similar device] (Grade B)• Sequential-gradient pneumatic compression (Grade C) (AAWC, 2005¹³)
<p>Rationale for the measure: Compression therapy is fundamental to promote healing and prevent recurrence of ulcers in patients with venous abnormality.</p>

Although it has proven efficacy, research has shown that it is not universally used in the treatment of patients with venous ulcers. One study found that one third of patients did not receive compression of any sort and there was great variability in the level and type of compression therapy used.¹⁴ Graduated high compression (>30 mmHg) produces the best results. However, some compression is better than no compression.

Data capture and calculations:

Calculation for Performance

For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.

Performance Numerator (A) Includes:

- Patients who were prescribed compression therapy within the 12 month reporting period

Performance Denominator (PD) Includes:

- All patients aged 18 years and older
- AND
- Diagnosis of venous ulcer

Performance Denominator Exclusions (C) Include:

- Documentation of medical reason(s) for not prescribing compression therapy (eg, severe arterial occlusive disease)
- Documentation of patient reason(s) for not prescribing compression therapy
- Documentation of system reason(s) for not prescribing compression therapy

Performance Calculation

$$\frac{A \text{ (# of patients meeting measure criteria)}}{PD \text{ (# of patients in denominator) - C \text{ (# of patients with valid denominator exclusions)}}$$

Components for this measure are defined as:

A	# of patients who were prescribed compression therapy within the 12 month reporting period
C	# of patients with documented medical (eg, severe arterial occlusive disease), patient, or system reason(s) for not prescribing compression therapy within the 12 month reporting period
PD	# of patients aged 18 years and older with a diagnosis of venous ulcer

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator

Reporting Numerator includes each of the following instances:

- A. Patients who were prescribed compression therapy within the 12 month reporting period
- C. Patients who were not prescribed compression therapy within the 12 month reporting period, but for whom there is a documented medical (eg, severe arterial occlusive disease), patient, or system reason for not doing so
- D. Patients who were not prescribed compression therapy within the 12 month reporting period and there is no documented reason for not doing so

Reporting Denominator (RD) Includes:

- All patients aged 18 years and older with a diagnosis of venous ulcer

Reporting Calculation

$$\frac{A(\text{\# of patients meeting numerator criteria}) + C(\text{\# of patients with valid exclusions}) D(\text{\# of patients NOT meeting numerator criteria})}{RD(\text{\# of patients in denominator})}$$

Components for this measure are defined as:

A	# of patients who were prescribed compression therapy within the 12 month reporting period
C	# of patients who were <u>not</u> prescribed compression therapy within the 12 month reporting period, but for whom there is a documented medical (eg, severe arterial occlusive disease), patient, or system reason for not doing so
D	# of patients who were <u>not</u> prescribed compression therapy within the 12 month reporting period and there is no documented reason for not doing so
RD	# of patients aged 18 years and older with a diagnosis of venous ulcer

Measure Specifications – Measure #4: Use of compression system in patients with venous ulcers
Measure specifications for data sources other than administrative claims will be developed at a later date.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria.

(Note: The specifications listed below are those needed for performance calculation.)

Denominator (Eligible Population): All patients aged 18 years and older with a diagnosis of venous ulcer

- CPT® E/M Service Codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245
- AND
- ICD-9 diagnosis codes: 459.31, 459.33, 459.81
- AND
- ICD-9 diagnosis codes: 707.12, 707.13, 707.14, 707.15, 707.19

Numerator: Patients who were prescribed compression therapy within the 12 month reporting period

- Report the CPT Category II code 4267F- Compression therapy prescribed

Denominator Exclusions:

Documentation of medical reason(s) for not prescribing compression therapy (eg, severe arterial occlusive disease)

- Append modifier for CPT category II code: 4267F-1P

Documentation of patient reason(s) for not prescribing compression therapy

- Append modifier for CPT category II code: 4267F- 2P

Documentation of system reason(s) for not prescribing compression therapy

- Append modifier for CPT category II code: 4267F-3P

B. Electronic Health Record System *(in development)*

C. Paper Medical Record *(in development)*

Chronic Wound Care

Measure #5: Patient education regarding long term compression therapy

This measure may be used as an Accountability measure

Clinical Performance Measure
<p>Numerator: Patients who received education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period</p> <p>Denominator: All patients aged 18 years and older with a diagnosis of venous ulcer</p> <p>Denominator Exclusion: None</p> <p>Measure: Percentage of patients aged 18 years and older with a diagnosis of venous ulcer who received education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period</p>
<p>The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure:</p> <p>Part of any prevention program must be patient education. This education should include the patient's individual skin care program, moisturizers, soaps and protective measures. The patient should be educated about the long term nature of this medical condition and the signs and symptoms of recurrence. There are many therapeutic modalities that have been shown to reduce the recurrence of lower extremity wounds includ[ing] graduated compression stockings (GCS) for patients with venous hypertension or at risk for venous insufficiency disease. (ASPS, 2007⁶)</p> <p>Patients with healed or surgically repaired venous ulcers should use compression stockings constantly and forever. (Level I) (WHS, 2006³)</p> <p>Compression stockings or other compression devices must be worn for the prevention of venous edema and venous leg ulcer recurrence. It is recommended that patients understand that compression therapy is needed for the rest of their lives [including the need to] apply compression stockings upon first rising in the morning, replace stockings regularly—about every 3 months—to provide optimal compression, have someone correctly measure stockings, which should include ankle circumference, length of leg from foot to knee, and midcalf circumference. These measurements should be done in the morning before edema occurs. Knee-length stockings are generally recommended. (WOCN, 2005¹²)</p> <p>Compression, elevation, ambulation post healing [are recommended] to prevent recurrence. (Grade A) (AAWC, 2005¹³)</p>
<p>Rationale for the measure: Venous ulcers often recur, especially in patients who are not compliant with compression therapy, with rates as high as 70%.³ "Numerous investigators have found that compliance is dependent on patient access to compression stockings and appropriate education."¹⁵ As a result, long term maintenance including the continued appropriate use of compression therapy must be addressed through patient education.</p>
<p>Data capture and calculations:</p> <p><u>Calculation for Performance</u> For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator and Denominator.</p> <p>Performance Numerator (A) Includes:</p>

- Patients who received education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period

Performance Denominator (PD) Includes:

- All patients aged 18 years and older
- AND
- Diagnosis of venous ulcer

Performance Calculation

$$\frac{A \text{ (# of patients meeting numerator criteria)}}{PD \text{ (# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients who received education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period
PD	# of patients aged 18 years and older with a diagnosis of venous ulcer

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator.

Reporting Numerator includes each of the following instances:

A. Patients who received education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period

D. Patients who did not receive education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period

Reporting Denominator (RD) Includes:

- All patients aged 18 years and older with a diagnosis of venous ulcer

Reporting Calculation

$$\frac{A(\text{\# of patients meeting numerator criteria}) + D(\text{\# of patients NOT meeting numerator criteria})}{RD \text{ (\# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients who received education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period
D	# of patients who did not receive education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period
RD	# of patients aged 18 years and older with a diagnosis of venous ulcer

Measure Specifications – *Measure #5: Patient education regarding long term compression therapy*

Measure specifications for data sources other than administrative claims will be developed at a later date.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria.

(Note: The specifications listed below are those needed for performance calculation.)

Denominator (Eligible Population): All patients aged 18 years and older with a diagnosis of venous ulcer

- CPT® Service Codes: 97535, 98960, 98961, 98962, 99078, 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245

AND

- ICD-9 diagnosis codes: 459.31, 459.33, 459.81

AND

- ICD-9 diagnosis codes: 707.12, 707.13, 707.14, 707.15, 707.19

Numerator: Patients who received education regarding the need for long term compression therapy including interval replacement of compression stockings within the 12 month reporting period

- Report the CPT Category II code 4268F- Patient education regarding the need for long term compression therapy including interval replacement of compression stockings, received

Denominator Exclusion: *None*

B. Electronic Health Record System *(in development)*

C. Paper Medical Record *(in development)*

Chronic Wound Care

Measure #6: Offloading (pressure relief) of diabetic foot ulcers

This measure may be used as an Accountability measure

Clinical Performance Measure
<p>Numerator: Patients who were prescribed an appropriate* method of offloading (pressure relief) within the 12 month reporting period</p> <p><i>*An appropriate method of offloading (pressure relief) includes any of the following: crutches, walkers, wheelchairs, custom shoes, depth shoes, shoe modifications, custom inserts, custom relief orthotic walkers (CROW), diabetic boots, forefoot and heel relief shoes, or total contact casts</i></p> <p>Denominator: All patients aged 18 years and older with a diagnosis of diabetes and foot ulcer</p> <p>Denominator Exclusion: Documentation of medical reason(s) for not prescribing an appropriate method of offloading (pressure relief) (eg, non-plantar location) Documentation of patient reason(s) for not prescribing an appropriate method of offloading (pressure relief) Documentation of system reason(s) for not prescribing an appropriate method of offloading (pressure relief)</p> <p>Measure: Percentage of patients aged 18 years and older with a diagnosis of diabetes and foot ulcer who were prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period</p>
<p>The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure:</p> <p>The reduction of pressure to the diabetic foot ulcer is essential to treatment. Proper off-loading and pressure reduction prevents further trauma and promotes healing. This is particularly important in the diabetic patient with decreased or absent sensation in the lower extremities. (Frykberg et al., ACFAS, 2006¹⁶)</p> <p>Relieving pressure on the diabetic wound is necessary to maximize healing potential. Acceptable methods of offloading include crutches, walkers, wheelchairs, custom shoes, depth shoes, shoe modifications, custom inserts, custom relief orthotic walkers (CROW), diabetic boots, forefoot and heel relief shoes, and total contact casts. (Level I) (WHS, 2006⁵)</p> <p>Removal of pressure from a foot wound (i.e., off-loading) is crucial to the healing process. (A-1) Many types of devices can off-load the infected wound, but it is important to choose one that permits easy inspection. (Lipsky et al., IDSA, 2004²)</p>
<p>Rationale for the measure: Offloading is a mainstay in the prevention and treatment of diabetic foot ulcers. Despite its importance in the care of patients with diabetic foot ulcers, a recent study examining wound care practices found that approximately 23% of patients with diabetic ulcers had no documentation of offloading devices.¹⁰</p>
<p>Data capture and calculations:</p> <p><u>Calculation for Performance</u> For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.</p> <p>Performance Numerator (A) Includes:</p> <ul style="list-style-type: none">Patients who were prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting

period

Performance Denominator (PD) Includes:

- All patients aged 18 years and older
- AND
- Diagnosis of diabetes
- AND
- Diagnosis of foot ulcer

Performance Denominator Exclusions (C) Include:

- Documentation of medical reason(s) for not prescribing an appropriate method of offloading (pressure relief) (eg, non-plantar location)
- Documentation of patient reason(s) for not prescribing an appropriate method of offloading (pressure relief)
- Documentation of system reason(s) for not prescribing an appropriate method of offloading (pressure relief)

Performance Calculation

$$\frac{A \text{ (# of patients meeting measure criteria)}}{PD \text{ (# of patients in denominator)} - C \text{ (# of patients with valid denominator exclusions)}}$$

Components for this measure are defined as:

A	# of patients who were prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period
C	# of patients with documented medical (eg, non-plantar location), patient, or system reason(s) for not prescribing an appropriate method of offloading (pressure relief) within the 12 month reporting period
PD	# of patients aged 18 years and older with a diagnosis of diabetes and foot ulcer

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator.

Reporting Numerator includes each of the following instances:

- A. Patients who were prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period
- C. Patients who were not prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period, but for whom there is a documented medical (eg, non-plantar location), patient, or system reason for not doing so
- D. Patients who were not prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period and there is no documented reason for not doing so

Reporting Denominator (RD) Includes:

- All patients aged 18 years and older with a diagnosis of diabetes and foot ulcer

Reporting Calculation

$$\frac{A(\text{\# of patients meeting numerator criteria}) + C(\text{\# of patients with valid exclusions}) + D(\text{\# of patients NOT meeting numerator criteria})}{RD \text{ (\# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients who were prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period
C	# of patients who were <u>not</u> prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period, but for whom there is a documented medical (eg, non-plantar location), patient, or system reason for not doing so
D	# of patients who were <u>not</u> prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period and there is no documented reason for not doing so
RD	# of patients aged 18 years and older with a diagnosis of diabetes and foot ulcer

Measure Specifications – Measure #6: Offloading (pressure relief) of diabetic foot ulcers

Measure specifications for data sources other than administrative claims will be developed at a later date.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper).

(Note: The specifications listed below are those needed for performance calculation.)

Denominator (Eligible Population): All patients aged 18 years and older with a diagnosis of diabetes and foot ulcer

- CPT® E/M Service or Procedure Codes: 11040, 11041, 11042, 11043, 11044, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245

AND

- ICD-9 diagnosis codes: 250.80, 250.81, 250.82, 250.83

AND

- ICD-9 diagnosis codes: 707.14, 707.15

Numerator: Patients who were prescribed an appropriate method of offloading (pressure relief) within the 12 month reporting period

- Report the CPT Category II code 4269F- Appropriate method of offloading (pressure relief) prescribed

Denominator Exclusion:

Documentation of medical reason(s) for not prescribing an appropriate method of offloading (pressure relief) (eg, non-plantar location)

- Append modifier for CPT category II code: 4269F-1P

Documentation of patient reason(s) for not prescribing an appropriate method of offloading (pressure relief)

- Append modifier for CPT category II code: 4269F-2P

Documentation of system reason(s) for not prescribing an appropriate method of offloading (pressure relief)

- Append modifier for CPT category II code: 4269F-3P

B. Electronic Health Record System *(in development)*

C. Paper Medical Record *(in development)*

Chronic Wound Care

Measure #7: Patient education regarding diabetic foot care

This measure may be used as an Accountability measure

Clinical Performance Measure
<p>Numerator: Patients who received education regarding appropriate foot care* AND daily inspection of the feet within the 12 month reporting period</p> <p>*Definition - Appropriate foot care may include “self-inspection and surveillance, monitoring foot temperatures, appropriate daily foot hygiene, use of proper footwear, good diabetes control, and prompt recognition and professional treatment of newly discovered lesions.”¹⁶</p> <p>Denominator All patients aged 18 years and older with a diagnosis of diabetes and foot ulcer</p> <p>Denominator Exclusions: None</p> <p>Measure: Percentage of patients aged 18 years and older with a diagnosis of diabetes and foot ulcer who received education regarding appropriate foot care AND daily inspection of the feet within the 12 month reporting period</p>
<p>The following clinical recommendation statements are quoted <u>verbatim</u> from the referenced clinical guidelines and represent the evidence base for the measure:</p> <p>Good foot care and daily inspection of the feet will reduce the recurrence of diabetic ulceration. (Level II) (WHS, 2006⁵)</p> <p>Patient and family education assumes a primary role in prevention. Diabetic patients at risk for foot lesions must be educated about risk factors and the importance of foot care, including the need for self-inspection and surveillance, monitoring foot temperatures, appropriate daily foot hygiene, use of proper footwear, good diabetes control, and prompt recognition and professional treatment of newly discovered lesions. (Frykberg et al., ACFAS, 2006¹⁶)</p> <p>Educate the patient about the importance of optimizing glycemic control, using appropriate footwear at all times, avoiding foot trauma, performing daily self-examination of the feet, and reporting any changes to health care professionals. (A-II) (Lipsky et al., IDSA, 2004²)</p>
<p>Rationale for the measure:</p> <p>Educating diabetics about foot care has proven helpful in reducing foot ulcers and amputations, particularly in high risk patients.¹⁷ Nevertheless, studies have shown that diabetic patients are not offered adequate foot care.^{18,19} In one study examining several aspects of foot care in patients with diabetes, 28% of patients reported that they had not received foot education from their physician.¹⁹ Moreover, the presence of risk factors for lower limb complications was not associated with a greater chance of receiving foot education. The same study noted that patients who had received foot education and had their feet examined by their physician were more likely to perform self inspection.¹⁹ “When combined with a comprehensive approach to preventive foot care, patient education can reduce the frequency and morbidity of limb threatening diabetic foot lesions.”¹⁶</p>
<p>Data capture and calculations:</p> <p><u>Calculation for Performance</u> For performance purposes, this measure is calculated by creating a fraction with the following components: Numerator, Denominator, and Denominator Exclusions.</p> <p>Performance Numerator (A) Includes:</p> <ul style="list-style-type: none"> • Patients who received education regarding appropriate foot care AND daily inspection of the feet within the 12 month

reporting period

Performance Denominator (PD) Includes:

- All patients aged 18 years and older
- AND
- Diagnosis of diabetes
- AND
- Diagnosis of foot ulcer

Performance Calculation

$$\frac{A \text{ (\# of patients meeting measure criteria)}}{PD \text{ (\# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients who received education regarding appropriate foot care AND daily inspection of the feet within the 12 month reporting period
PD	# of patients aged 18 years and older with a diagnosis of diabetes and foot ulcer

Calculation for Reporting

For reporting purposes, this measure is calculated by creating a fraction with the following components: Reporting Numerator and Reporting Denominator.

Reporting Numerator includes each of the following instances:

- A. Patients who received education regarding appropriate foot care AND daily inspection of the feet within the 12 month reporting period
- D. Patients who did not receive education regarding appropriate foot care AND daily inspection of the feet within the 12 month reporting period

Reporting Denominator (RD) Includes:

- All patients aged 18 years and older with a diagnosis of diabetes and foot ulcer

Reporting Calculation

$$\frac{A(\text{\# of patients meeting numerator criteria}) + D(\text{\# of patients NOT meeting numerator criteria})}{RD \text{ (\# of patients in denominator)}}$$

Components for this measure are defined as:

A	# of patients who received education regarding appropriate foot care AND daily inspection of the feet within the 12 month reporting period
D	# of patients who <u>did not</u> receive education regarding appropriate foot care AND daily inspection of the feet within the 12 month reporting period
RD	# of patients aged 18 years and older with a diagnosis of diabetes and foot ulcer

Measure Specifications – *Measure #7: Patient education regarding diabetic foot care*

Measure specifications for data sources other than administrative claims will be developed at a later date.

A. Administrative claims data

Administrative claims data collection requires users to identify the eligible population (denominator) and numerator using codes recorded on claims or billing forms (electronic or paper).

(Note: The specifications listed below are those needed for performance calculation.)

Denominator (Eligible Population): All patients aged 18 years and older with a diagnosis of diabetes and foot ulcer

- CPT® Service or Procedure Codes: 11040, 11041, 11042, 11043, 11044, 97535, 98960, 98961, 98962, 99078, 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245
- AND
- ICD-9 diagnosis codes: 250.80, 250.81, 250.82, 250.83
- AND
- ICD-9 diagnosis codes: 707.14, 707.15

Numerator: Patients who received education regarding appropriate foot care AND daily inspection of the feet within the 12 month reporting period

- Report the CPT Category II code 4305F- Patient education regarding appropriate foot care AND daily inspection of the feet, received

Denominator Exclusion: *None*

B. Electronic Health Record System *(in development)*

C. Paper Medical Record *(in development)*

EVIDENCE CLASSIFICATIONS / RATING SCHEMES

WHS Strength of Evidence Level^{3,4,5}

- Level I: Meta-analysis of multiple RCTs or at least two RCTs support the intervention of the guideline. Another route would be multiple laboratory or animal experiments with at least two clinical series supporting the laboratory results.
- Level II: Less than Level I, but at least one RCT and at least two significant clinical series or expert opinion papers with literature reviews supporting the intervention. Experimental evidence that is quite convincing, but not yet supported by adequate human experience.
- Level III: Suggestive data of proof-of-principle, but lacking sufficient data such as meta analysis, RCT, or multiple clinical series.

In addition to Level of Evidence, the strength of the recommendation is classified for arterial insufficiency ulcers.

- Level A: Strongly recommended/Likely to be of benefit.
- Level B: Recommended.
- Level C: Recommended but not essential.
- Level D: NOT recommended

ASPS Scales for Rating Levels of Evidence and Grading Practice Recommendations⁶

Evidence Rating Scale

Level of Evidence	Diagnostic Studies	Prognostic Studies	Therapeutic Studies
I	High-quality, multi-centered or single-centered, cohort study validating a diagnostic test (with “gold” standard as reference) in a series of consecutive patients; or a systematic review of these studies	High-quality, multi-centered or single-centered, prospective cohort study with adequate power; or a systematic review of these studies	High-quality, multi-centered or single-centered, randomized controlled trial with adequate power; or systematic review of these studies
II	Exploratory cohort study developing diagnostic criteria (with “gold” standard as reference) in a series of consecutive patient; or a systematic review of these studies	Lesser-quality prospective cohort study; retrospective study; untreated controls from a randomized controlled trial; or a systematic review of these studies	Lesser-quality, randomized controlled trial; prospective cohort study; or systematic review of these studies
III	Diagnostic study in nonconsecutive patients (without consistently applied “gold” standard as reference); or a systematic review of these studies	Case-control study; or systematic review of these studies	Retrospective comparative study; case-control study; or systematic review of these studies
IV	Case-control study; or any of the above diagnostic studies in the absence of a universally accepted “gold” standard	Case series	Case series
V	Expert opinion; case report or clinical example; or evidence based on physiology, bench research or “first principles”	Expert opinion; case report or clinical example; or evidence based on physiology, bench research or “first principles”	Expert opinion; case report or clinical example; or evidence based on physiology, bench research or “first principles”

Scale for Grading Recommendations

Grade	Descriptor	Qualifying Evidence	Implications for Practice
A	Strong Recommendation	Level I evidence or consistent findings from multiple studies of levels II, III, or IV	Clinicians should follow a strong recommendation unless a clear and compelling rationale for an alternative approach is present.
B	Recommendation	Levels II, III, or IV evidence and findings are generally consistent	Generally, clinicians should follow a recommendation but should remain alert to new information and sensitive to patient preferences.
C	Option	Levels II, III, or IV evidence, but findings are inconsistent	Clinicians should be flexible in their decision-making regarding appropriate practice, although they may set bounds on alternatives; patient preference should have a substantial influencing role.
D	No Recommendation	Level V evidence; little or no systematic empirical evidence	Clinicians should consider all options in their decision-making and be alert to new published evidence that clarifies the balance of benefit versus harm; patient preference should have a substantial influencing role.

WOCN Types of Evidence Classification¹²

- Level A: Two or more supporting randomized controlled trials (RCTs) on lower extremity arterial disease (LEAD) in humans (at Levels I or II), meta-analysis of RCTs, or Cochrane Systematic Review of RCTs.
- Level B: One or more supporting controlled trials on lower extremity arterial disease in humans or two or more supporting trials in an animal model (at Level III).
- Level C: One supporting controlled trial, at least two supporting case series that were descriptive studies on humans, or expert opinion.

Association for the Advancement of Wound Care (AAWC) Strength of Evidence Ratings¹³

- Grade A: Results of two or more randomized controlled trials (RCTs) in humans provide support (or for diagnostics or risk analysis: cohort (CO) studies)
- Grade B: Results of two or more historically controlled trials (HCTs) or convenience assignment or non-randomized controlled trials (CCTs) or a CCT and a RCT in humans provide support or when appropriate, results of two or more controlled trials in an animal model provide indirect support.
- Grade C: This rating requires one or more of the following:
 - Results of one controlled trial (e.g. RCT or CCT or HCT)
 - Results of at least two case series (CS) or descriptive studies or a cohort study in humans
 - Expert opinion (EO)

Infectious Diseases Society of America (IDSA) –United States Public Health Service Grading System for ranking recommendations in clinical guidelines²

Category, grade	Definition
Strength of recommendation	
A	Good evidence to support a recommendation for use; should always be offered
B	Moderate evidence to support a recommendation for use; should generally be offered
C	Poor evidence to support a recommendation; optional
D	Moderate evidence to support a recommendation against use; should generally not be offered
E	Good evidence to support a recommendation against use; should never be offered
Quality of evidence	
I	Evidence from ≥ 1 properly randomized, controlled trial
II	Evidence from ≥ 1 well-designed clinical trial, without randomization; from cohort or case controlled analytic studies (preferably from 11 center); from multiple time-series; or from dramatic results from uncontrolled experiments
III	Evidence from opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees

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