U.S. WOUND REGISTRY™

*Adequate Compression at each visit for Patients with Venous Leg Ulcers (VLUs) appropriate to arterial supply*

# MEASURE ID: USWR32

**MEASURE DESCRIPTION:**
Percentage of venous leg ulcer visits among patients aged 18 years and older in which adequate compression is performed at each treatment visit during the 12-month reporting period. Arterial status must first be assessed to ensure that compression can be implemented safely.

**DENOMINATOR:**
All visits for patients aged 18 years or older in which a venous leg ulcer (VLU) is treated within the 12-month reporting period.

**NUMERATOR:**
All visits for VLU treatment in which an adequate compression method is performed at each visit in the 12-month reporting period among patients with adequate arterial supply.

**DENOMINATOR EXCLUSIONS:**
Death, amputation, Palliative care or hospice patients, VLU patients seen for consultations only, VLU patients with fewer than 2 visits in 30 days.

**DENOMINATOR EXCEPTIONS:**
Compression not provided for patient, system or medical reasons. Exceptions include patients for whom inadequate arterial supply makes compression medically inappropriate.

**NUMERATOR EXCLUSIONS:**
None

**HIGH PRIORITY MEASURE:**
Yes

**MEASURE TYPE:**
Intermediate Outcome

**NQS DOMAIN:**
Effective Clinical Care

**SUBMISSION PATHWAY (MIPS REPORTING OPTION):**
Traditional MIPS

**INCLUDES TELEHEALTH:**
No

**CARE SETTING:**
Ambulatory Care: Clinician Office/Clinic; Ambulatory Care: Hospital; Home Care; Hospital Outpatient; Nursing Home; Outpatient Services; Post-Acute Care; Rehabilitation Facility

### APPLICABLE SPECIALTIES:
Podiatry, Wound Care, Cardiology, Cardiothoracic Surgery, Dermatology, Emergency Medicine, Family Medicine, Geriatrics, Internal Medicine, Interventional Cardiology, Physical Medicine & Rehabilitation, Physical Therapy/Occupational Therapy, Post-Acute Care, Primary Care, Other: Undersea and Hyperbaric Medicine (UHM is an ABMS recognized subspecialty)

### PUBLISHED CLINICAL CATEGORY:
Wound Care

### MEANINGFUL MEASURE AREA:
Preventable Healthcare Harm

### MEANINGFUL MEASURE AREA RATIONALE:
Compression of venous leg ulcers is the standard of care for VLUs and VLUs will not heal without compression. However, 25% of patients with a VLU have undiagnosed arterial disease and compression could cause limb ischemia in those patients. Compression can be adapted to the level of arterial status to prevent healthcare harm when the standard of care is implemented for active venous ulcers.

### MEASURE CALCULATION TYPE/INDICATOR:
Proportional Measure

### NUMBER OF PERFORMANCE RATES:
1

### INDICATE OVERALL PERFORMANCE RATE:
1st Performance Rate

### RISK ADJUSTED STATUS:
No

### TRADITIONAL OR INVERSE MEASURE:
Traditional

### CLINICIAN TESTED QCDR MEASURE:
Yes

### CLINICAL RECOMMENDATION STATEMENT:
Venous ulcers heal more rapidly with compression than without, based on RCT data. 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. The degree of compression must be modified when mixed venous/arterial disease is confirmed during the diagnostic work-up (Level I evidence)". Compression for venous leg ulcers. O'Meara S, Cullum NA, Nelson EA. Department of Health Sciences, University of York, Area 3 Seebohm Rowntree Building, Heslington, York, UK, YO10 5DD. smo4@york.ac.uk Update in Cochrane Database Syst Rev. 2012;11:CD000265. Available at: http://www3.interscience.wiley.com/cgi-bin/fulltext/118605278/HTMLSTART Compression therapy heals more venous leg ulcers than no compression therapy as well as decreases the healing time. Level of evidence = A. High compression is more effective than low compression. Level of evidence = A. Wound, Ostomy, and Continence Nurses Society - Professional Association. 2005, Available at: http://www.guideline.gov/search/searchresults.aspx?Type=3&txtSearch=venous+ulcers&num=20

### QCDR MEASURE RATIONALE:

Compression increases ulcer healing rates compared with no compression. Multi-component systems are more effective than single-component systems. Multi-component systems containing an elastic bandage appear more effective than those composed mainly of inelastic constituents. The Definition of Adequate Compression is a system which applies 30-40mmHg at the ankle; a multilayer high-compression device, which includes 3- or 4-layer short stretch bandages; and/or paste-containing bandages (e.g., Duke or Unna's boot). Compression stockings may be helpful in preventing ulcer recurrence but are a less ideal option for pressure ulcer treatment. The level of compression (pressure applied) will need to be modified if the patient has arterial occlusive disease. Short stretch bandages can be highly effective and are advised for patients with reduced arterial flow. Involvement of a vascular specialist is the best approach among patients with mixed arterial and venous disease. While reduced arterial flow is a potentially serious complication of venous compression, the most common reason venous ulcers fail to heal is inadequate compression. Despite the fact that compression is the mainstay of therapy for VLUs, a 2010 USWR study showed that patients with venous ulcers were provided adequate compression in fewer than 17% of visits, even at hospital based outpatient wound centers. A PQRS measure focused on compression of venous ulcers (now retired) allowed clinicians to pass the measure by applying ANY type compression (adequate not defined) one time in a 12 month period. When the USWR reviewed data on this measurer, all eligible providers passed the measure using these specifications, but only 10% would have passed it using the "at each visit" specification. Since 2014, providers reporting the venous compression measure through the USWR QCDR have improved their performance of this measure to more than 70% of visits. However, providers who do NOT report the measure still provide compression in only 25% of VLU visits, indicating that among non-reporters, a significant gap in practice still remains.

While reduced arterial flow is a potentially serious complication of venous compression, the most common reason venous ulcers fail to heal is inadequate compression. Thus, this measure attempts to improve venous ulcer care and outcome with compression, but without risking harm to the patient. Compression is the standard of care for VLUs but arterial disease must be assessed prior to its implementation. It should be remembered that the threshold values for the arterial status groupings above are only a guide and are not intended to replace medical judgement. Due to variability in testing methods, machine calibration, anatomical differences and variations in compression bandaging techniques, these numbers should not be construed as reliable predictions of healing or the ability to tolerate compression. Patients with low values may be able to undergo compression safely. Patients whose non-invasive studies appear normal may have arterial disease and/or be unable to tolerate well-applied compression. Clinicians should use many different types of information in making patient care decisions, including and especially patient reported information. This is not a "documentation" measure. Arterial assessment must be performed by the practitioner and compression bandages appropriately selected and applied at the clinic visit, both of which are medical procedures.

**STUDY CITATION:**

A 2010 USWR study showed that patients with venous ulcers were provided adequate compression in fewer than 17% of visits, even at hospital-based outpatient wound centers. A PQRS measure focused on compression of venous ulcers (now retired) allowed clinicians to pass the measure by applying ANY type compression (adequate not defined) one time in a 12 month period. When the USWR reviewed data on this measurer, all eligible providers passed the measure using these specifications, but only 10% would have passed it using the "at each visit" specification. Since 2014, providers reporting the venous compression measure through the USWR QCDR have improved their performance of this measure to more than 70% of visits. However, providers who do NOT report the measure still provide compression in only 25% of VLU visits, indicating that among non-reporters, a significant gap in practice remains. Although significant progress has been in the implementation of compression bandaging, less progress

has been made in arterial screening. The average performance rate remains below 25%. If venous compression is implemented at a faster rate than arterial assessment, harm could occur. However, USWR data show that practitioners who report both the arterial screening measure and the venous compression measure to the USWR have a VLU healing rate at least 10% higher than their counterparts who do not perform arterial assessment, both of which are the standard of care in venous disease.