

CDR5: Process measure: Adequate Compression of Venous Leg Ulcers (VLU) at each treatment visit, appropriate to arterial supply

MEASURE STEWARD:

US Wound Registry

[Note: This measure has been under testing as part of the “Do The Right Thing™” initiative in 6 New York state hospitals based outpatient wound centers]

This measure was developed via a consensus process in collaboration with the Alliance of Wound Care Stakeholders Member Organizations, which include 16 wound care related clinical associations.

DESCRIPTION:

Percentage of venous leg ulcer visits among patients aged 18 years and older in which adequate compression is provided within the 12-month reporting period. Compression method should be appropriate to documented arterial supply.

NATIONAL QUALITY STRATEGY DOMAIN: Effective Clinical Care

MEASURE TYPE: Process

MEANINGFUL MEASURE AREA: Appropriate Use of Healthcare

HIGH PRIORITY: No

INVERSE MEASURE: No

TRADITIONAL MEASURE: Yes

PROPORTIONAL MEASURE: Yes

RISK ADJUSTED: Yes

There are four rates reported for this measure.

The four rates will be risk stratified into three buckets which are the following:

1. Normal arterial supply- No restrictions on type of compression
2. Compression bandaging with special considerations (e.g. short stretch bandaging, warnings to the patient to remove bandages if they feel too tight, etc.)
3. Compression bandaging not usually recommended
4. The average of the three risk stratified buckets which will be the performance rate in the JSON XML submitted.

NUMERATOR:

All visits for VLU treatment in which an adequate compression method is documented in the 12 months reporting period that is also appropriate to the arterial supply.

DENOMINATOR:

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

DENOMINATOR EXCLUSIONS/EXCEPTIONS

EXCLUSIONS: Death, Palliative care patients, VLU patients seen for consultations only, VLU patients with <2 visits in 30 days

EXCEPTIONS: Adequate compression not prescribed for Medical, Patient or System Reasons

Testing method	No evidence of arterial disease (able to heal, no restrictions regarding type of compression)	Possible arterial compromise (short stretch compression is recommended, compression should be performed under careful observation, patient should be given warnings, arterial supply likely adequate to heal)	Evidence of Arterial disease, refer to a vascular specialist if not currently in vascular care, may not be able to heal, compression bandaging not usually recommended
ABI	>0.8- 1.3	0.6 – 0.8 Or > 1.3	<0.6
SPP	>40 mmHg	30 – 40 mmHg	<30 mmHg
TCOM	>40 mmHg	30 – 40 mmHg	<30 mmHg

The numbers above serve only as 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. These values are only a guide and clinicians should use many different types of information in making patient care decisions, including and especially patient reported information.

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*.

Principle: Venous hypertension causes lower leg edema and in more severe cases, venous ulcers. Compression of the affected area helps remove the leg edema, which in turn permits healing of the ulcer.

Gap in Practice:

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.

EVIDENCE:

1. “Venous ulcer healing is increased when adequate compression is applied to the lower extremity. Venous ulceration results from an elevated ambulatory venous pressure (venous hypertension). This frequently causes edema of the limb. External compression has been the mainstay to combat these problems. 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 (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. There was reasonable evidence from seven RCTs that venous ulcers heal more rapidly with compression than without. Wound Healing Society 2007. Available at: <http://www3.interscience.wiley.com/cgi-bin/fulltext/118605278/HTMLSTART>

2. 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>