Livewell Southwest

# Lower Limb Ulceration Policy

Version No 4.0

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**Notice to staff using a paper copy of this guidance**

**The policies and procedures page of Intranet holds the most recent version of this guidance. Staff must ensure they are using the most recent guidance.**

**Author:** **Clinical Nurse Specialist Tissue Viability**

**Asset Number:** **169**

**Reader Information**

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| **Title** | Lower Limb Ulceration Policy. V.4 |
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| **Category** | Clinical |
| **Document purpose/summary** | Guidance for staff in promoting Tissue Integrity and Managing Lower Limb Ulceration.<br>The policy provides staff with a framework for assessment, intervention and management of patients who have lower limb Ulceration |
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| **Stakeholders** | Practice Lead LWS & PHUT. Community Modern Matrons & District Nursing Services LWS. Tissue Viability Specialist Nurses LWS & PHUT. Vascular Consultants & Vascular Nurse PHUT. Managers from the Lower Limb Service LWS. |
| **Consultation process** | This policy was produced in consultation with Managers from:<br>Practice Lead<br>Community Matron<br>The District Nursing Services<br>Vascular Consultants & Vascular Nurse<br>Tissue Viability Specialist Nurses<br>Lower Limb Service Community Team Manager<br>Lower Limb Specialist Nurse<br>University Hospitals Plymouth |
| **Equality analysis checklist completed** | Yes |

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| **Is the Equality and Diversity Policy referenced** | No |
| **Is the Equality Act 2010 referenced** | No |
| **References/sources of information** | National Wound Care Strategy Programme (2020) Lower Limb Recommendations for Clinical Care.<br><br>National Institute for Clinical Excellence (2001) Wound Care-Debriding agents. Reference TA24. Ref CG 29 www.nice.org.uk http://www.nice.org.uk/<br><br>A Randomized Trial of Early Endovenous Ablation in Venous Ulceration. The New England Journal of medicine (2018) Manjit S. Gohel, M.D., Francine Heatley, B.Sc., Xinxue Liu, Ph.D.,<br>Andrew Bradbury, M.D., Richard Bulbulia, M.D., Nicky Cullum, Ph.D.,<br>David M. Epstein, Ph.D., Isaac Nyamekye, M.D., Keith R. Poskitt, M.D.,<br>Sophie Renton, M.S., Jane Warwick, Ph.D., and Alun H. Davies, D.Sc.,<br>for the EVRA Trial Investigators*.<br><br>National Institute of Clinical Excellence (2006) Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition Reference: **CG32** www.nice.org.uk Varicose Veins: Diagnosis and management. Clinical Guideline 168 Published July 2013<br><br>National Institute of Clinical Excellence Leg ulcers-Venous Clinical Knowledge Summaries Published 2013<br><br>Holistic Management of venous Ulceration Wounds UK November 2016<br><br>Best Practice Statements – Venous Leg Ulcers and Compression Hosiery 2016<br><br>Health Economic Burden that Wounds impose on the NHS in the UK Guest et al 2016 BMJ open 2015 Published 7th December 2015<br><br>Guest *et al.* 2020 Cohort study evaluating the burden of wounds to the UK's National Health Service *BMJ open*<br><br>https://www.youtube.com/watch?v=8xqJ7l7Kn5A<br><br>Betty's Story – link above |

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| | National Institute of Clinical Excellence (2017) Healthcare-associated infections: prevention and control in primary and community care http://www.nice.org.uk/<br><br>Nursing and Midwifery Council<br>The Code (2018) Guidelines for records and record keeping (2010)<br>Standards for the administration of medicines (2007)<br>http://www.nmc-uk.org/<br><br>Royal College of Nursing Institute, Clinical Practice Guidelines: The Management of Patients with venous leg ulcers. London: RCN Institute, 1998 http://www.rcn.org.uk/<br><br>SIGN. The Care of Patients with Chronic Leg Ulcers, Edinburgh: SIGN Secretariat, 1998<br><br>Understanding Compression Therapy (2003) EWMA Position Document. Medical Educational Partnership www.ewma.org<br><br>Chronic Venous Insufficiency and Venous Ulceration-Aetiology and Treatment (2008) E.R Sqibb & Sons, L.L.C.<br><br>Lindsey l & White R 2008 Leg Ulcers and Problems of the Lower Limb. HealthComm UK Ltd<br><br>Guidelines specific to Tissue Viability<br><br>European Wound Management Association (EWMA). (2006) Position Document: Management of wound infection. London: www.ewma.org<br><br>World Union of Wound Healing Societies (WUWHS) (2007) Principles of best Practice: Wound exudates and the role of dressings. A consensus document. London: MEP Ltd www.wuwhs.org<br><br>Identifying criteria for **wound infection** EWMA Position Document. (2005) www.ewma.org<br><br>Hard to heal wounds : the Holistic approach (2008) www.ewma.org<br><br>Minimising pain at wound dressing-related procedures World Union of Wound Healing Societies' Initiative www.wuwhs.org Published by www.mepltd.co.uk<br><br>Wound exudate and the role of dressings<br>World Union of Wound Healing Societies' Initiative<br>www.wuwhs.org |

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| | .<br>NHS Modernisation Agency 2003 Essence Of Care Benchmarks<br><br>DOH/Skills for Health http://www.skillsforhealth.org.uk/<br><br>Hopkins, A. et al. 2017 Needing More: The Case for Extra High Compression for Tall Men in UK Leg Ulcer Management *Veins and Lymphatics* |
| **Associated documentation** | Livewell Southwest Competencies in Compression Bandaging and Holistic Doppler Assessment including measurement of ABPI<br><br>TIMES FRAMEWORK<br>Tissue<br>Infection, Inflammation or Biofilm<br>Moisture imbalance<br>Edge of Wound<br>Surrounding Skin<br><br>Lower Limb Ulceration Assessment form – Endovenous and Arterial/General<br>Lower Limb Ulceration Referral Pathway – endovenous and Arterial/general<br>Patient Passport |
| **Supersedes document** | V.3.1 |
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**Document review history**

| Version no. | Type of change | Date | Originator of change | Description of change |
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| For previous review history please contact the PRVG Co-ordinator. | | | | |
| 2.3 | Review | 25/02/2012 | Clinical Nurse Specialist Tissue Viability | Review of flow chart. |
| 2.4 | Review | 12/03/2014 | Clinical Nurse Specialist Tissue Viability | Reviewed and major changes made. Management of Venous Leg Ulcers guidelines added. |
| 2.5 | Review | 10/06/14 | Clinical Nurse Specialists Tissue Viability<br>Matron DN Treatment Clinic<br>Vascular Surgeons<br>Lead Vascular Nurse | Reviewed. |
| 2.6 | Competencies | 02/03/16 | Livewell Southwest Ratification Group | New competencies added. |
| 2.7 | Extended | 06/09/2018 | Deputy Locality Manager – South | Extended no changes |
| 3 | Lower Limb Pathway | 24.04.2018 | Clinical Nurse Specialist Tissue Viability<br>D/N Clinic manager<br>Vascular Surgeons<br>Vascular Nurse Specialist | Pathway reviewed. |
| 3.1 | Addition | September 2019 | Undergraduate & Preceptorship Lead | Page 6 inserted: Policy Guidance for Undergraduate/Pre-Registration Nursing Degree, Degree Apprentice & Trainee Nursing Associate Students. |
| 4 | Reviewed | May 2023 | Hannah Blake, Tissue Viability Clinical Nurse Specialist | Major changes/changes to practice. |

## Policy Guidance Note for Registered Nursing Associates (NA), Qualified Assistant Practitioners (AP), Undergraduate/Pre-Registration Nursing Degree Students Trainee Nursing Associates (TNAs), Trainee Assistant Practitioners (TAP's)

**Medicines Administration for Registered Nursing Associates.**

Please refer to the separate document/policy Nursing Associate -Scope of Practice policy - Nursing Associate Scope of Practice.doc

**Medicines Administration for Qualified Assistant Practitioners**

Please refer to the separate document/policy Assistant Practitioner – Scope of Practice policy Assistant Practitioner (Nursing) Scope of Practice.doc

**MEDICINES ADMINISTRATION**

**Undergraduate/Pre-Registration Nursing Degree Students**

- The NMC require students to develop a range of proficiencies by the end of their programme
- https://www.nmc.org.uk/standards/standards-for-nurses/standards-of-proficiency-for-registered-nurses/
- Registered Health Care professionals are required to facilitate achievement through supervision and assessment
- Where policy previously excluded students from certain routes of medicines administration, they should now be exposed to ensure they are fully prepared at the point of registration
- Exposure to a proficiency applies across all fields of nursing; Adult, Child, Learning Disability & Mental Health
- https://www.plymouth.ac.uk/uploads/production/document/path/13/13197/FAQs_and_advice_clinical_skills.pdf

**Trainee Nursing Associates**

- The NMC require Trainee Nursing Associates (TNA's) to develop a range of proficiencies by the end of their programme
- The NMC have set out what a Nursing Associate should know and be able to do when they join the register via the Standards of Proficiency (NMC 2018a). https://www.nmc.org.uk/standards/standards-for-nursing-associates/standards-of-proficiency-for-nursing-associates/
- Registered Health Care professionals are required to facilitate achievement through supervision and assessment
- Whilst training TNA's should be exposed to the routes of administration as detailed in the standards to ensure they are fully prepared at the point of registration

**DELEGATION & ACCOUNTABILITY**

**Undergraduate/Pre-Registration Nursing Degree Students**

- The registered nurse is professionally accountable for the delegated task set to the student nurse. The student nurse in accepting the delegated task remains personally accountable.
- The student nurse should be directly observed by a registered professional when administering medication.
- The student nurse should not work outside their competency or where there is an unpredictable and/or fluctuating picture.

**Trainee Nursing Associates**

- The registered nurse is professionally accountable for the delegated task set to the TNA. The TNA in accepting the delegated task remains personally accountable.
- The TNA should be directly observed by a registered professional when administering medication.
- Unless the TNA is competent in a specific route of administration within their Band 3 scope of practice. Where proficiency has been achieved at a Band 3 level the TNA can continue to administer via that route independently.
- The TNA should not work outside their competency or where there is an unpredictable and/or fluctuating picture.

## TRAINING & COMPETENCIES

**Undergraduate/Pre-Registration Nursing Degree Students**

- All student nurses will undertake the theory of medicines management/administration with the education provider i.e. Plymouth University, in line with the new NMC standards of proficiency for registered nurses.
- Details of provision of theory, opportunity for simulated introduction to the proficiencies and record of assessment/achievement are outlined in the student's electronic Practice Assessment Documentation (e-PAD).
- On-going supervision for any medicines administration will be required until they are registered.

**Trainee Nursing Associates**

- All TNA's will undertake a Safe administration of medicine's workshop within the first month of the programme. A full module will be completed in Year 2 of the Foundation degree on the theory of medicines management/administration with the education provider i.e. Plymouth University, that mirrors the degree programme. This is in line with the NMC standards of proficiency for Nursing Associates.
- Achievement and assessments involving medicines administration are detailed in the TNA's electronic Practice Assessment Document. (PAD)
- A registered nurse will assess the TNA in a formal practice medicines assessment, once a year.
- On-going supervision for any medicine's administration will be required until they are registered. Unless as stated, the TNA is competent in a specific route of administration within their Band 3 scope of practice.

## CORE ROUTES

**Undergraduate/Pre-Registration Nursing Degree Students**

Degree nursing students should have opportunities to administer medication via the following routes:

- Oral (10.2,11.4,11,8*)
- Topical (11.8*)
- Subcutaneous (10.2,11.7*)
- Per rectum (6.5*)
- Inhaled (8.5,10.2*)
- Intramuscular (10.2,11.7*)
- Intravenous (5.8,9.9,10.2,11.7*)
- Enteral (5.7 + 11.9*)
- 02 therapy (8.2*)
- Transdermal (11.8*)
- Via infusion pumps (5.9*)
- Vascular access device (VAD) (11.9*)
- Intradermal (11.7*)

* Denotes reference point/proficiency number within Annex B Nursing Procedures; NMC Standards of proficiency for Registered Nurses

**Trainee Nursing Associates**

Trainee Nursing Associates should have opportunities to administer medication via the following routes:

- Oral (10.4*)
- Topical (10.4*)
- Inhalation (10.4*)
- Subcutaneous (10.5*)
- Intramuscular (10.5*)
- Enteral (4.4* 10.6*)
- Per rectum (10.7*)
- 02 therapy (7.1*)

* Denotes reference point/proficiency number within Annex B Procedures to be undertaken by the Nursing Associate Nursing Procedures; NMC Standards of proficiency for Nursing Associates

## PATIENT GROUP DIRECTIONS (PGDs)

**Undergraduate/Pre-Registration Nursing Degree Students, Trainee Nursing Associates and Nursing Associates**

- Undergraduate/Pre-Registration Nursing Degree Students, Trainee Nursing Associates and Nursing Associates are **NOT allowed** to administer medication as defined within a PGD under any circumstances
- Only registered staff as defined within a PGD are able to administer medication under that PGD
- PGDs cannot be delegated

## CONTROLLED DRUG ADMINISTRATION

**Undergraduate/Pre-Registration Nursing Degree Students**

- Student Nurses can administer CD medication under the direct supervision of a registered nurse
- Student nurses can be a second checker for CD medication under the direct

supervision of a registered nurse.

**Trainee Nursing Associates**

- Trainee Nursing Associates can administer CD medication under the direct supervision of a registered nurse
- Trainee Nursing Associates can be a second checker for CD medication under the direct supervision of a registered nurse.

**Please note: <u>Trainee Assistant Practitioners</u>** should always be directly supervised by a Registered Practitioner when administering all medication.

## Lower Limb Ulceration Policy.

# 1 Foreword

1.1 These guidelines are not intended to be a textbook or training manual. Neither are they intended a rigid or inflexible tool.

1.2 It is strongly recommended that anyone involved in the delivery of leg ulcer care has had adequate training and developed their competencies in leg ulcer assessment, Doppler ultrasound, compression bandaging techniques and leg ulcer management. The evidence base for these guidelines is based upon systematic reviews conducted by Scottish Intercollegiate Guidelines Network (SIGN 2010), Best Practice Statement Holistic Management of Venous Leg Ulcers Wounds UK (2016) and the National Wound Care Strategy Lower Limb Recommendations (2020). A full reference and recommended reading list will be given at the end of these guidelines.

# 2 Introduction

2.1 Venous leg ulcers are the most common type of leg ulcer (SIGN 2010; Guest et al 2020). Guest et al (2015) found that there were at least 730,000 patients with leg ulcers in the United Kingdom which equated to 1.5% of the adult population. This number is increasing significantly and rose to over 1million in 2017 (Guest et al 2020). Patients with Venous Leg Ulcers often present with repeated cycles of ulceration healing and recurrence. Such ulcers can take weeks or months to heal and 12 month recurrence rates are estimated at between 18 and 28%. In a recent study it was identified that approximately 25% of wounds lacked a differential diagnosis and only 15% of the total number of lower limb wounds had received an ABPI assessment, indicative of practical difficulties experienced by non-specialist clinicians (Guest et al 2020).

2.2 These estimates are primarily associated with venous ulceration and yet the cost of arterial disease (and some venous ulceration) that is not managed effectively can result in lower limb amputation. The financial cost of which is £6,103 per limb and the potential personal consequence on quality of life of this surgery is or can be insurmountable.

2.3 In 2018 Livewell Southwest successfully secured the contract for Lower Limb Services. Lower Limb Wellbeing Clubs were implemented across Livewell Southwest . The concept of the Wellbeing Club is based on a social model of care. The aim of the Well-being Club is to provide holistic care to people suffering from lower limb disease and venous ulceration. The service is a collaborative model with Livewell Southwest, Primary Care and Marjon University and includes:

- Exercise suitable to attendees.
- Education relevant to the attendees including management of healthy

skin, the use of hosiery and the importance of nutrition.

- Social interaction through the delivery of appropriate activities to promote social and psychological support, fostering Wellbeing.

- Voluntary Sector involvement is encouraged. The service uses a mix of skills to achieve key objectives:

- Provide specialist, holistic assessment for patients with lower limb ulceration associated with chronic venous disease, arterial disease and mixed aetiology ulceration.
- Improve the quality of life for people with complex co-morbidities and lower limb ulceration.
- Develop an agreed care plan with the patient.
- Implement gold standard compression therapy.
- Provide evidence based care.
- Work collaboratively with mainstream services across health and social care
- Focus on the social aspect of care and improve quality of life.
- Maximise independence.
- Share knowledge and skills and empower others.
- Monitor and audit healing rates.
- Audit patient outcomes using a qualitative questionnaire.
- Prevent hospital admission.
- Reduce risk of recurrence.

The overall aim of the Wellbeing Clubs is to demonstrate an efficacious model of care engaging with patients and understanding the impact of lower limb ulceration on their quality of life. This will be achieved through collaborative working and empowering allied health care professionals with the expertise to deliver safe harm free care. In 2022, Livewell Southwest become a first tranche implementation site for the National Wound Care Strategy Programme Lower Limb recommendations.

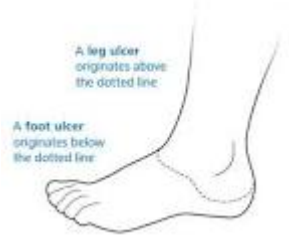
## 3 Purpose

3.1 The purpose of the document is:

- To identify methods of assessment, intervention and treatment therapies by ensuring early detection and intervention of venous disease, promote healing and reduce recurrence of lower limb ulceration.
- To provide health professionals with evidence linked recommendations of leg ulcer assessment and management.
- Assist the practitioner to identify the presence of arterial or mixed aetiology disease and facilitate prompt non-medical referral.
- Formulate and implement appropriate care and management plan.
- Reduce variations in practice and standardise care across health care settings and to facilitate appropriate and timely referral to secondary care.

3.2 Moreover, the clinician is made aware of the necessity for patient participation and involvement in their care to ensure therapeutic, non-judgemental relationships with informed patient consent (Van Hecke *et al* 2009). This will be achieved by incorporating a social model of care that is a combination of clubs, clinics and practice based delivery, depending on demographics and prevalence.

3.3 This document outlines the required assessment, interventions and treatment for patients with leg ulceration. This area has been defined by the NWCSP as below the knee, extending to on or above the malleolus (NWCSP 2020). Any wound originating below the malleolus is defined as a foot wound and therefore be treated in line with the associated policy.




## 4 Duties

4.1 The Chief Executive has overall responsibility for care and treatment of patients and the implementation of this policy.

4.2 The Deputy Director of Professional Practice, Quality and Safety, and Heads of Service Managers will be responsible for ensuring that all staff follow the standards set out in this policy.

4.3 The Tissue Viability / Specialist Lead, Vascular Specialist Nurse, and Well-being Managers are responsible for providing evidence-based education and training for staff within Livewell Southwest (LSW) and University Hospitals Plymouth NHS Trust (UHP), and the Implementation and review of the Lower Limb (Leg Ulcer) Policy and the supporting literature.

4.4 Unit / Ward Managers / Service Managers/District Nurse Team Managers/Wellbeing Club Leads are responsible for the safe implementation of the policy.

4.5 All staff caring for patients with Lower Limb Ulceration will comply with all standards and procedures outlined in this policy.

4.6 All patients require specialist assessment within 2 weeks of presentation to the service/health care professional.

The following Pathway should be adhered to:

Patient presents with leg ulcer ➔ Early Holistic Doppler Assessment including calculating the ABPI within 2 weeks ➔ Identify aetiology of ulcer and commence compression therapy as indicated considering patient choice ➔Refer to vascular services for further assessment or possible intervention ➔ Treatable Venous Hypertension ➔ No ➔ Continue with compression therapy and regular reassessment ➔ Yes vascular intervention sclerotherapy/surgical intervention. (see Pathway at rear of document - Appendix E)

## 5 Definitions

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| Lower limb/leg Ulceration | A venous leg ulcer is defined as an open lesion between the knee and the ankle joint that occurs in the presence of venous disease and takes more than 2 weeks to heal (NICE 2013). |
| Debridement. | The removal of dead (devitalised) tissue, cell debris or foreign matter from a wound. |
| Strong Graduated Compression Therapy | A bandaging, hosiery/adjustable Velcro compression devices (AVCD) system that facilitates venous return via the venous circulatory system to the heart. The graduation indicates that the sub-bandage pressure is greater at the ankle and reduced at the knee. The level of pressure achieved is determined using elastic or inelastic bandages according to the ulcer aetiology, the circumference of the limb, the configuration of the bandage system being used and the level of competency of the practitioner applying the bandage system. Strong graduated compression applies 40mmHg at the ankle. In certain circumstances, it may be appropriate to use higher levels of compression +40mmHg (Hopkins et al 2017), however this should only on the recommendation of Vascular, TV or a community |

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| | nurse specialist. |
| Compression Hosiery | Stockings or socks that are woven from elastic or inelastic fibres to achieve graduated compression to the lower limb in limbs that have healed, have superficial ulceration, or varicosities and associated skin changes due to early stages of venous disease. Compression hosiery also enables patients to self-care and encourages concordance with the desired treatment. |
| Adjustable Velcro Compression Device (AVCD) | A Velcro adjustable compression device that can be easily applied with minimal training, reducing the risk of over or under compression , which allows adjustment as limb volume decreases, facilitates self-care with showering or bathing and can deliver compression to the foot resulting in minimal impact in footwear or clothing. |
| Mild / Reduced compression | Reduced compression is used to treat patients who cannot tolerate full compression or who are not suitable for full compression systems so must be closely monitored. |
| Short Stretch bandaging | This system of bandaging provides an inelastic system for patients' with lymphoedema/chronic oedema and patients who have restricted ankle movement. |
| Sub bandage pressure | The interface pressure exerted between the limb and the bandages. |
| Doppler Assessment | Is an assessment using Doppler ultrasounds which measure the patient's Ankle Brachial Pressure Index (ABPI). This could be with achieved by using a traditional manual Hand held Doppler or automated APBI MD can be performed. Currently there is minimal evidence to support the use of automated ABPI machines in patients with ulceration. Further research is required and therefore we are only recommended the Automated ABPI for use in simple assessments in the absence of gross oedema, lymphatic changes, Atrial Fibrillation, known arterial disease, complex diabetes or advanced renal impairment. The purpose of a Doppler assessment is to eliminate arterial disease. Compression must never be applied to treat arterial ulcers. Occasionally the vascular surgeon may request compression therapy dependant on the degree of arterial |

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| | disease. On these occasions specific written instructions must be obtained from the consultant and the therapy must be closely monitored by the health care professional responsible for delivering the patient's care. |
| Duplex | A non-invasive ultrasound that provides an immediate picture of the veins and arteries to determine the strength and direction of blood flow. Duplex studies are used to identify venous incompetence and arterial disease. |
| ABPI | The ABPI (**A**nkle, **B**rachial **P**ressure **I**ndex) confirms or excludes the presence of arterial disease in the lower limb and is calculated via a comprehensive Doppler assessment. It determines the percentage of blood supply to the patient's Lower Limb. |
| Competent | A clinician that has had training in a specialised area and has achieved a level of capability that deems them competent. No form of compression therapy should be applied by practitioners who have not undertaken a recognised training program in leg ulcer management or that have not been deemed capable through a competency framework, as high compression therapy inappropriately applied can cause significant damage. |

# 6 Guidance

### Assessment

### Ankle Brachial Pressure Index (ABPI)

The measurement of the patient's ABPI must be undertaken by practitioners who have received adequate training in leg ulcer management and whose competencies have been updated according to local policy – Appendix A. Appropriate training is required due to complexities around the interpretation of the results. ABPI is carried out to substantiate the presence or absence of significant peripheral arterial disease (PAD), except in those patients with calcified vessels. For values above 1.3 (ABPI) and associated with ulceration, the vessels are likely to be incompressible and the results cannot be relied upon to make a clinical decision (SIGN 2006). Please note that people with calcified arteries may present with an abnormally raised ABPI requiring an assessment of palpable and audible foot pulses and Doppler waveform. Please ensure a manual Doppler is performed in this circumstance and refer to Tissue Viability for advice if required, as compression may still be indicated.

6.1 All patients to be assessed by a competent registered nurse or an Assistant Practitioner (AP), who has received adequate training, experience and has

worked through a competency framework.

6.2 Patients who have a wound to the lower limb must undergo a leg ulcer assessment including an ABPI calculation within 2 weeks of presentation to a clinician, for example within 2 weeks from date of referral to the District Nursing Service or Wellbeing Lower Limb service. For in-patient settings, a full assessment including ABPI should be performed as soon as possible where clinically appropriate.

6.3 On first presentation to a clinician, all patients with lower limb ulceration should be assessed for Reg Flags (NWCSP 2020). The assessment of red flags includes ruling out the following: Sepsis, acute infection, acute or chronic limb threatening ischaemia, suspected deep vein thrombosis or suspected skin cancer.

Advanced practitioners who are confident in Red Flag assessment can initiate mild graduated compression (up to 20mmHg) in the absence of Red Flags, prior to a full holistic ABPI assessment.

6.4 Planning of Doppler/ABPI assessment should be undertaken in negotiation with the patient to ensure the patient has an understanding of the procedure and to reduce potential anxiety. Doppler assessment is performed following a full clinical assessment and forms part of a holistic assessment to identify aetiology and develop treatment plans.

6.5 Aspects of past history, aetiology and patho-physiology and clinical signs and symptoms to be recorded on the assessment form with patient perceptions of the impact of their symptoms reflected in the care plan. Factors such as obesity, malnutrition, cognitive state, mobility, intravenous drug use and co-existing medical conditions will affect prognosis and suitability for venous surgery (SIGN 2010).

Clinical Assessment of the Patient:

Document:-

- Relevant past medical history.
- Associated disease and risk factors (table 2).
- Current ulcer history.
- Previous ulceration and successful/unsuccessful treatments.
- Current drug therapy.
- Allergies.
- Presence and type of pain
- Nutritional status and their build using an appropriate recognised assessment tool e.g. Pain Scale Measuring Tool and MUST if required.
- Sleep pattern.
- Social circumstances.
- Psychological status.
- Wound imaging via Minuteful for Wound app weekly or if deterioration/changes noted , or via the SNAP for SeeEHR system in

inpatient settings.

6.6 Although chronic venous insufficiency is the most common cause of leg ulceration the circulation cannot be viewed in isolation. Assessment of the patients' ABPI by an experienced healthcare professional should bring together general and specific information on the following:

- Patient's medical history.
- Skin.
- Circulation.
- Limb.
- Site and presentation of Ulcer.

The assessment should answer the following questions:

- What is the cause and possible aetiology of the ulcer?
- What factors may delay healing?
- What is the most appropriate treatment for this individual patient?
- Are there any correctable risk factors which will speed healing and reduce recurrence?
- Consider why the ulcer/ulcers aren't healing or why they are recurrent.
- Risk of infection and preventative measures.

Patients presenting with signs of chronic venous insufficiency and lower limb ulceration should be referred to the vascular services for assessment of underlying correctable venous disease within a timely manner, where appropriate.

Referrals to vascular services may be made by community specialist nurses. Please contact tissue viability for further advice.

The EVRA randomised clinical trial revealed that early venous intervention results in faster healing rates, extended periods free from ulceration and significant cost savings.

Identification of venous disease should prompt referral via the Endovenous referral form (see appendix D). The National Institute of Clinical Excellence (NICE CQ 168 2013) recommends referral within two weeks of identifying the signs and symptoms.

Wounds with an underlying arterial aetiology should be referred to Vascular via the Arterial/General referral form (see appendix D)

6.7 The patient's mobility should be considered including joint mobility/fixed ankle joint and gait as compression bandaging will affect the patient's mobility. Help available to the patient in the community must also be considered when prescribing compression hosiery and ease of application.

6.8 All patients with an ABPI of <0.65 and ulceration are deemed to have significant arterial disease and should be referred to Vascular services as an

urgent referral.

6.9 Approximately 5% of patients will have Diabetes Mellitus. All Diabetic patients with ulceration that is on the foot and below the malleolus should be referred to the Joint Diabetic Foot Clinic at University Hospitals Plymouth NHS Trust. Compression therapy should be applied with caution in patients with diabetes and leg and foot ulceration due to potential micro vessel disease and neuropathy. This could increase the risk of pressure ulcers. Neuropathy is not always a contra-indication however a diabetic patient with painful neuropathy will not be able to tolerate compression therapy and the therapy may exacerbate the symptoms. Best practice is to ensure that all patients with diabetes have their feet tested to ensure sensation is intact prior to compression therapy.

**Important note:** Compression therapy should **not** be routinely applied in the presence of pressure ulcers to the heels. Advice should first be sought from the Tissue Viability or Vascular Service and refer to the Pressure Ulcer Policy.

6.10 A high ABPI (e.g. >1.3) in the absence of clinical symptoms of arterial disease and without lower limb ulceration does not require referral to Vascular services. However it should be remembered that some diabetic patients will develop arterial calcification and diabetic microangiopathy. This can cause the ABPI to be elevated and will therefore give a false reading. An arterial duplex scan recommended for these patients to accurately assess peripheral perfusion. Patients with a long standing history of diabetes mellitus and associated high blood glucose or uncontrolled blood glucose levels are particularly high risk.

6.11 The outcome of the assessment should be fully explained to the patient with the results of the clinician's investigation. Different treatment options must be discussed to offer the patient a choice and encourage concordance, enabling the patient and clinician to achieve an agreed plan of care that is reflective of evidenced based practice guidelines.

6.12 The "My Lower Limb Passport" information and care plan (see appendix B), or a patient information leaflet should be provided to all patients under the Lower Limb service receiving treatment for their lower limb condition.

6.13 Patients who present with primary lymphoedema should be referred to the lymphoedema service:
Livewell Southwest.livewell.lymphoedeamservice@nhs.net

## 7 Procedures

7.1 Procedures will be undertaken that comply with universal precautions for control of infection and correct disposal of clinical waste.

7.2 Equipment used during the assessment purpose (such as Doppler or Sphygmomanometer) will be fit for purpose and the procedure carried out under optimum conditions.

7.3 For patients with active ulceration a full re-assessment to identify causes of non-healing should be performed every 12 weeks. In some circumstances, this should include a Doppler assessment to assess for changes in arterial flow. Routine Doppler reassessment should be carried out every 48 weeks and thereafter at 48 week intervals or if there is a clinical change in the patient's symptoms which may affect the patient's arterial status. When an ulcer recurs, a full assessment should be carried out including a Doppler. Patients with healed ulcers using compression hosiery should have a reassessment of their ABPI every 12 months or sooner if there is a clinical change in presenting symptoms. As part of patient's annual reassessment, their maintenance compression (hosiery, AVCDs) should be reviewed and replaced in line with manufacturer guidelines.

7.4 Those patients who have undergone a Duplex scan will not require a follow up Duplex or Doppler unless there are significant clinical signs of deterioration. Compression can be applied following a Deep Vein Thrombosis when the limb is comfortable and has been fully anti-coagulated. A duplex scan is only valid on the day that it is performed so it is essential to monitor the Patient for the signs and symptoms of Arterial disease and reassess as indicated if they present or if there is any deterioration or change in the ulcer presentation.

7.5 Compression therapy is the gold standard treatment for patients with venous leg ulcers. There are a variety of compression systems available to allow patient choice and participation. Strong compression multi component bandaging should be considered in the treatment of venous leg ulcers using a long-stretch or two layer system or an alternative compression system such as AVCD, refer to local formulary. Where appropriate and according to patient's limb shape, wound and exudate levels, compression via hosiery kit of AVCD should be considered first line. In the presence of lymphatic changes or chronic oedema please consider the use of short-stretch compression bandages.

7.6 Compression therapy should only be applied by staff with the appropriate training and in accordance with the manufacturers' instructions.

7.7 Primary dressings deemed necessary to address symptoms such as management of pain or exudate, or to promote healing will follow the recommendations of the South and West Devon Formulary unless discussed and agreed with Specialist Tissue Viability services. Most venous ulcers can be treated with a simple low adherent primary dressing under their compression therapy dependant on the classification of the ulcer bed. There is no clinical evidence to support the use of complex wound care products under compression therapy unless there are clear clinical indications.

7.8 In the presence of chronic kidney disease or cardiac failure please liaise with cardiac/renal team prior to commencing any form of treatment.

7.9 Assessment of healing should be undertaken by a registered nurse at a minimum of 4 weekly intervals. Onward referrals to specialist services (i.e.

Vascular, dermatology, TV etc.) should be considered in the event of deterioration or non-healing. If the wound has not made significant progress towards healing at 12 weeks, a full reassessment should be performed and consideration of onward referrals.

## 8 Education

8.1 All qualified nurses and healthcare professionals with a responsibility for caring for patients with lower limb ulceration will be updated in the treatment and management of leg ulceration particular to their level of intervention.

8.2 Registered Nurses will be deemed competent in compression bandaging and holistic Doppler assessment by an experienced clinician who has been deemed competent in leg ulcer management. Achieving competence will require practice to build upon the theoretical knowledge from education and training. The competencies will be signed off 3 yearly. They will complete yearly self assessment thereafter. Assistant Practitioners and Extended Role Health Care Assistants will have their competencies supervised and signed off by a competent Registered Nurse.

8.3 Education and training will be made available to both Livewell Southwest & UHP, via the Tissue Viability and Vascular services; and reflect the education requirements of staff. Educational study days will be designed for all Registered Nurses, Associate Nurses, Assistant Practitioners and Health Care Assistants involved in the management and treatment of leg ulcers. Consideration will be given to the level of expertise and competencies of the group receiving training and sessions will be designed specifically to meet their needs.

8.4 Additional training resources are available via the E-learning for Health platform. This training is supported by the National Wound Care Strategy Programme and should be used as a refresher for staff to complement their attendance at the in-house Leg Ulcer Management training programme. Please see the training links in Appendix E

8.5 Staff will ensure that patents/clients and their carers are informed of the elements of and their role in maintaining tissue integrity. Patients and carers will be taught the basic principles of good skin care to maintain skin integrity. They will be shown how and when to apply compression hosiery and will be provided with information regarding hosiery applicators to encourage concordance.

8.6 In UHP, some healthcare staff will be trained to apply compression. This training will include completion of the modules indicated by the National Wound Care Strategy (Essentials of Skin Care, Essentials of Leg Ulceration and Choosing the right compression) (*See appendix E)* followed by practical bandage training to meet the competencies in Appendix 1. This training will allow them to apply compression as advised and defined by a Tissue Viability Nurse on an individual patient basis.

# 9 Audit

9.1 Quality Assurance and Audit - The principles upon which this document is based are:

- An individual holistic assessment should be undertaken and evidenced-based treatment plans commenced. This will take into account the underlying aetiology, patient's circumstances and their choices. Working in partnership with the practitioner's clinical judgement, available resources and knowledge of more recent research findings will facilitate the overall treatment goal.
- Those who undertake ABPI assessment, planning, implementation and evaluation of care should be trained, educated and competent in leg ulcer care and management. They should have attended an in-house Leg Ulcer Management training programme and will require supervision of their practice with an experienced nurse in leg ulcer management who has had their competencies signed off.
- The process should be clearly documented on the leg ulcer questionnaire form and should be accessible to all those caring for the patient to ensure continuity of care.

- Monitoring of ulcer healing and recurrence rates as an indicator of quality care will be undertaken regularly through a clinical audit process within Livewell Southwest. Audit will be carried out to assess the efficacy of the policy and referral pathway.

9.2 All information regarding referral of patients with lower limb ulceration whether within or without the organisation will be collated and shared via the Vascular Group Meetings and using the agreed Leg Ulcer Care Pathways (Appendix E). A collaborative, multi-disciplinary approach will be taken to meet the needs of patients with or at risk of leg ulcer development.

9.3 The success of the Well Being Clubs will be monitored according to set Key Performance Indicators and healing rates throughout the Community will be obtained and reviewed on a continual basis. Patient's satisfaction will be monitored using Questionnaires.

9.4 Key Performance Indicators for Livewell Southwest;

**<u>Clinical outcomes</u>**

- Healing rates at 12, 24 and 52 weeks divided by simple and complex defined ulcers.
- Post healing ulcer recurrence rates at 6 months, 1 year, 2 years, 5 years
- Presentations through A+E for an ulcer related condition, compared to baseline taken prior to the commencement of the service. (information to be provided by the CCG)
- Admission to hospital for and ulcer related condition, compared to baseline taken prior to the commencement of the service. (information to be provided by the CCG)

**Service efficiency outcomes**

- Number of new referrals
- Number of patients attending for annual reassessments
- Number of patients with leg ulcers engaging with well-being
- Number of patients who continue to engage with well- being post healing
- Number of patients engaging in well- being who receive a fast track when a leg ulcer reoccurs
- Percentage of patients getting first Treatment Service appointment within 2 weeks of receipt of primary care referral
- Percentage of patients with a completed full assessment (with Doppler ABPI) within 2 weeks of first appointment in Treatment Service. Target will be 100% with exception report for any breaches.
- Number of patients being referred to other specialists (dermatology, vascular, tissue viability etc) following initial full assessment by the service.
- Number of patients, who are under supervision by the service, who are self-managing their treatments.

**Patient experience outcomes**

- Themes and qualitative quotes from 'friends and family test' type satisfaction surveys
- Number of friends and family test' type satisfaction surveys undertaken in treatment and well leg services as a percentage of all patients receiving those services
- Number of patients reporting improvements in of pain levels,
- Number of patients reporting improvements in mobility

## 10 Monitoring Compliance and Effectiveness

10.1 Within Livewell, the Leg Ulcer Prevention and Management training will be delivered by the Tissue Viability Team and will be provided over the course of 2 days. The course will be available on 3 occasions annually, or according to demand. Supplementary training links are provided in the appendix.

10.2 Hyperlinks to relevant national guidance and best practice statements will be included on the reference list.

10.3 All documentation will be reviewed in response to the publication of evidence based research findings and /or National or International consensus publications that dictate essential review.

11 Service Specification;

NEW Devon leg ulcer spec.docx

**All policies are required to be electronically signed by the Lead Director. Proof of the electronic signature is stored in the policies database.**

**The Lead Director approves this document and any attached appendices. For operational policies this will be the Head of Service.**

**The Executive signature is subject to the understanding that the policy owner has followed the organisation process for policy Ratification.**

Signed: Nicky Stidever, Integrated Operational Lead – Specialist Services

Date: 09.10.2023

**Appendix A**

# Registered Nurse and Extended HCA Competencies

## Bandaging competency

Compression Bandaging Competency V2 Asset 10.docx

## Doppler competency

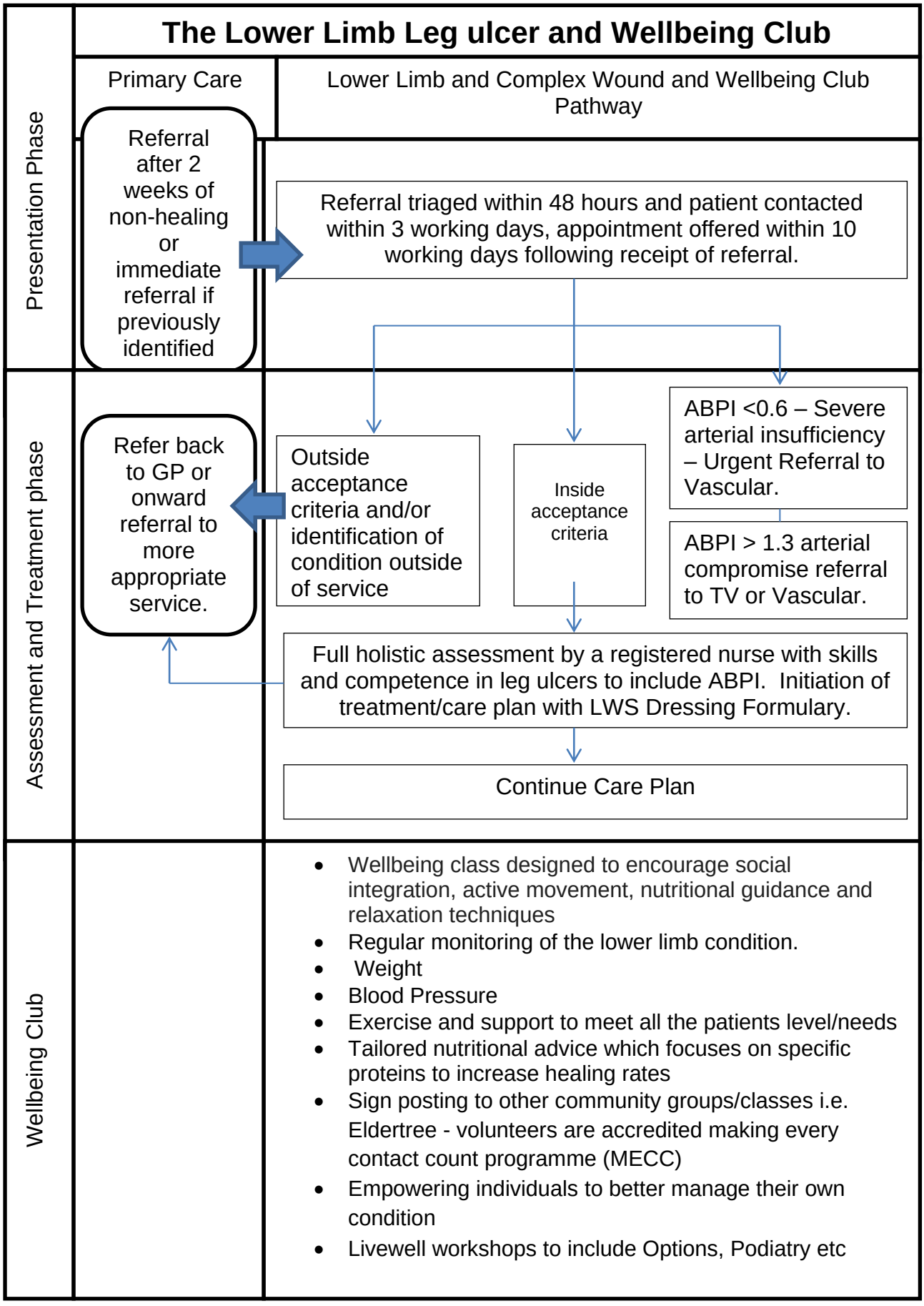
Doppler Lower Limb Competency V2 Asset 08.docx

## Appendix B – URGO Lower Limb Passport and patient leaflet


00000 URGO Lower Limb Passport_Livewe

URGO Leg Ulcer Patient Information L

## Appendix C


The Lower Limb Leg ulcer and Wellbeing Club
Primary Care
Lower Limb and Complex Wound and Wellbeing Club Pathway
Presentation Phase
Referral after 2 weeks of non-healing or immediate referral if previously identified
Referral triaged within 48 hours and patient contacted within 3 working days, appointment offered within 10 working days following receipt of referral.
Assessment and Treatment phase
Refer back to GP or onward referral to more appropriate service.
Outside acceptance criteria and/or identification of condition outside of service
Inside acceptance criteria
ABPI <0.6 – Severe arterial insufficiency – Urgent Referral to Vascular.
ABPI > 1.3 arterial compromise referral to TV or Vascular.
Full holistic assessment by a registered nurse with skills and competence in leg ulcers to include ABPI. Initiation of treatment/care plan with LWS Dressing Formulary.
Continue Care Plan
Wellbeing Club
Wellbeing class designed to encourage social integration, active movement, nutritional guidance and relaxation techniques
Regular monitoring of the lower limb condition.
Weight
Blood Pressure
Exercise and support to meet all the patients level/needs
Tailored nutritional advice which focuses on specific proteins to increase healing rates
Sign posting to other community groups/classes i.e. Eldertree - volunteers are accredited making every contact count programme (MECC)
Empowering individuals to better manage their own condition
Livewell workshops to include Options, Podiatry etc

# Appendix D

## Directions for the use of the Vascular Pathway Flow Chart

The Vascular Pathway requires the user to have performed both a clinical and Doppler Assessment to determine the presentation, symptoms and the blood supply of the affected limb/limbs. ABPI Measurements and referral criteria need to be considered to facilitate a correct referral. If ABPI cannot be undertaken then the reasons should documented on the referral. If an automated ABPI assessment has been unsuccessful please ensure a manual ABPI is attempted before making onward referrals.

The flow chart is an aide memoir for Clinicians on the appropriate intervention and referral criteria required for patients with lower limb ulceration .It aims to reduce inappropriate referrals to the wrong specialities, streamline patient care and ensure safe and effective leg ulcer management.

Lower Limb ulceration is defined as a wound that is below the knee and above the malleolus (ankle) that has been present for 2 weeks or more.

Foot ulceration is a wound that is below the malleolus. It's important to consider the clinical presentation and patient history to establish whether there is Ischemic disease or Neuropathy and whether they have a familial history or a diagnosis of Diabetes. Please see relevant foot ulceration policies.

### Arterial Ulcers

The Vascular Consultants recommend that a referral is required for all patients with leg ulceration whose ABPI 0.65 mmHg and below.

### Signs & Symptoms of Arterial ulcers include:

Resting pain to the toes/foot.
Discolouration of the toes or extremities (dependent rubor).
Increased pain not relieved on elevation.
Loss of sensation.
Atrophic shiny skin.
Increased depth of ulceration.

### Diabetic foot ulcers

All patients with Diabetes (Type I & II) with an ulcer on or below the malleolus should be referred to the diabetic foot clinic at University Hospitals Plymouth NHS Trust (UHP), for a more in-depth assessment.

**Mixed Venous / Arterial Ulcers**

Patients with mixed Venous / Arterial ulcers with ABPI of 0.65 - 0.8, should be routinely referred for a vascular assessment. Reduced compression may be commenced if clinically indicated and decisions documented. Close monitoring and observation is essential and compression must be discontinued if not tolerated.

**Uncomplicated Venous leg Ulcers**

These are often the end stage result of a chronic disease process, namely chronic venous insufficiency. Compression should be commenced in Patients with ABPI of 0.8 and above. NICE recommends that patients with active venous ulcers that have not healed within two weeks should now be referred to see a vascular specialist for consider treatment of the underlying venous disease to help prevent recurrence (NICE CQ 168 2013). A routine vascular referral for endovenous assessment should be made, as the Patient may benefit from surgical intervention, such as Foam Sclerotherapy.

**Healed leg ulcers**

The referral of healed ulcers is for those patients with signs of venous disease who may benefit from an endovenous intervention such as Ultrasound guided foam Sclerotherapy; to treat underlying venous disease and prevent ulcer recurrence. NICE recommends that patients with active venous ulcers that have not healed within two weeks should now be referred to see a vascular specialist for consider treatment of the underlying venous disease to help prevent recurrence (NICE CQ 168 2013).

**Calcified arteries**

Patients with an ABPI of > 1.3 do not routinely need a vascular assessment in the absence of arterial symptoms and/ or ulceration or tissue loss. Compression may only be commenced if clinically indicated and in the absence of symptoms of arterial disease or Red Flags under the advice and supervision of Tissue Viability when the Patient should be observed and closely monitored for further ischemic changes. A referral for vascular assessment may be indicated.

Any concerns or queries can be directed by telephoning/Emailing:-

(01752) 434757 Livewell Southwest Tissue Viability Service
Email: Livewell.CommunityTissueViability@nhs.net
(01752) 434625 Livewell Well Being Club
(01752) 763053 University Hospitals Plymouth NHS Trust (UHP), or
(01752) 439245 Vascular Specialist Nurse, University Hospitals Plymouth NHS Trust (UHP)

## Appendix E

Training resources

E-learning for Health:

000 Essentials of Wound care
Class: 000 Essentials of Wound Care Education for the Health and Care Workforce (esr.nhs.uk)

000 Wound Care Education: Choosing the right compression therapy
Class: 000 Wound Care Education - Choosing the right compression therapy (esr.nhs.uk)

000 Wound Care Education: Dressing wounds
Class: 000 Wound Care Education - Dressing wounds (esr.nhs.uk)

000 Wound Care Education: The foot at risk

Class: 000 Wound Care Education - The foot at risk (esr.nhs.uk)

The Granulation game:

HEE elfh Hub (e-lfh.org.uk)

National Wound Care Strategy Programme Lower Limb Recommendations:

https://www.ahsnnetwork.com/wp-content/uploads/2020/11/Lower-Limb-Recommendations-20Nov20.pdf

# Joint LIVEWELL SOUTHWEST & UHP Leg Ulceration: Vascular Treatment Pathway

**PRESENTATION: Patient presents with a Leg Ulcer, a wound below the knee that has been present for 4 weeks or more.**

## ASSESSMENT:

Undertake full clinical history and holistic patient assessment.

↓

Perform a Doppler Assessment to gain an ABPI (Ankle Brachial Pressure Index)

↓

**Where Doppler Ultrasound signal cannot obtained refer to Tissue Viability Service/ Vascular**

↓

Once Diagnosis confirmed, commence Treatment and consider Specialist Referral (See Referral Pathway overleaf). Refer to Joint Formulary for Dressings

Reference; EWMA Position Document 2003
Understanding compression therapy pp 12

## DIAGNOSIS:

| | |
|---|---|
| Arterial Ulcer<br>ABPI of < 0.65 | Nil Compression.<br>Simple dressings as per Plymouth Area Joint Formulary recommendations. |
| Mixed Venous/Arterial Ulcer/ Diabetic Leg Ulcer<br>(ON OR ABOVE MALLEOLUS)<br>ABPI OF 0.65 TO 0.8 | Mild compression up to 20mmhg should only be used in the absence of arterial symptoms. If arterial symptoms are present or evidence of compression damage DO NOT apply Compression and seek specialist advice. |
| Diabetic Foot Ulcer<br>(Below the Malleolus) | Dressings as per Plymouth Area Joint Formulary Recommendations |
| Uncomplicated Venous Ulcer<br>ABPI of >0.8 – 1.3 | Compression Therapy: Apply strong compression of 40 mmHgs with Elastic long stretch, Inelastic bandaging (Short Stretch) or Ktwo, AVCD or Hosiery Kits. |
| Healed Venous Leg Ulceration<br>ABPI of >0.8 | Prevention of recurrence: - Long Term compression hosiery, Skin Care & Education. |

## TREATMENT:

# Joint LIVEWELL SOUTHWEST & UHP Leg Ulceration: Vascular Referral Pathway

**Assessment: Patient presents with lower limb ulceration. Undertake full clinical history and holistic patient assessment including Ankle Brachial Pressure Index (ABPI).**

| DIAGNOSIS: | REFERRAL: | OUTCOME: |
|---|---|---|
| **Arterial Ulcer**<br>ABPI of < 0.65 | **URGENT** fast track referral to a Vascular Consultant via DRSS (0845 155 8283) | Priority outpatient appointment to investigate, diagnose and to treat underlying condition |
| **Mixed Venous/ Arterial Ulcer/ Diabetic leg ulcer**<br>(**ON OR ABOVE MALLEOLUS**)<br>ABPI of 0.65 to 0.8 | **Routine** Vascular Consultant referral via DRSS or email via Lower Limb service or Tissue Viability | Outpatient appointment to investigate, diagnose and treat underlying condition |
| **Diabetic Foot Ulcer**<br>(**BELOW THE MALLEOLUS**) | **All** patients with diabetic foot ulcers referred to the Joint Diabetes Foot PHT<br>https://www.plymouthhospitals.nhs.uk/dia | Effective management of diabetic foot ulcers within a specialist multi- disciplinary outpatients setting |
| **Uncomplicated Venous Ulcer**<br>ABPI of >0.8 | **Routine Referral to Vascular Specialist Venous Leg Ulcer Clinic if not healed within two weeks via DRSS/Email** | Duplex assessment of underlying venous insufficiency and assessment of suitability for compression therapy and possible treatment of venous disease |
| **Healed Venous Leg Ulceration**<br>ABPI of >0.8 | **Routine Vascular Specialist referral via DRSS/Email** | |

Reference; EWMA Position Document
2003 Understanding compression therapy pp 12