

Lower Limb Compression Formulary

Contents

Introduction	3
Compression Bandaging	4
Compression Bandaging Accessories - Reduced Compression Bandages, Toe Caps and Retention Bandages	5
Compression Hosiery – Hosiery Kits	6
Compression Hosiery – RAL Standard	7
Compression Hosiery – British Standard	8
Compression Hosiery – Custom Fit	9
Compression Wrap Systems	10
Additional Products ONLY to be used under instruction from Cancer Lymphoedema and Tissue Viability Service	12
Glossary	13
Supporting Information	14
Leg Ulcer Treatment Algorithm	15
Palliative Lower Limb Oedema Algorithm	16
Lower Limb Mild Oedema Algorithm	17
Wound Infection Framework	18

Introduction

The Compression and Oedema Formulary has been formulated by the NHS Borders Tissue Viability and Cancer Lymphoedema Service.

With over 700,000 people in the UK estimated as having leg ulceration and the documented annual cost of its management being a staggering £1.94 billion (Guest et al, 2015; 2018), its impact on NHS resources is significant. As leg ulcer management is currently estimated to account for at least 1.3% of the healthcare budget in the UK, it is essential that clinicians adhere to best practice to achieve optimal outcomes.

All staff referring to this formulary, need to be familiar with the local leg ulcer policy which aims to standardise care delivery and disseminate best practice in the assessment and management of patients suffering with venous leg ulcers (VLUs), across NHS Borders. It is essential to ensure that all patients presenting with a leg ulcer or signs of venous disease follow the Leg Ulcer Treatment Pathway included in this document and receive a timely holistic assessment.

If there are NO RED FLAGS, patients can be compressed using ≤ 20 mmHg.

Ankle-Brachial Pressure Index (ABPI) assessment can then be carried out by a healthcare professional trained in leg ulcer management and competent in the management of these patients, to confirm an accurate diagnosis including the continuation of appropriate compression systems.

Key Messages:

- There must always be a clear rationale for the choice of dressings
- The nurse managing the leg ulcer should be aware of the total cost of the dressing regimen
- Dressing choice should cut the frequency of dressing changes, where appropriate

Aims:

- Promoting evidence-based practice in leg ulcer management for patients throughout NHS Borders
- Guide practitioners in appropriate dressing choice
- Standardisation of appropriate practice
- Cost effectiveness

Dressings are applied to a leg ulcer deliver many benefits:

- Facilitate rapid healing
- Reduce pain
- Prevent or combat infection
- Manage exudate
- Remove or contain odour
- Promote concordance with effective treatment
- Provide maximum comfort for the patient

When dealing with the leg ulcer it is imperative to choose primary and secondary dressings from the NHS Borders Wound Formulary where choices are based on performance and stability of both the item and the manufacturing / supplying company, as well as consideration of price. Supplier details and contact numbers can also be obtained from the BNF. Wound healing is a dynamic process and the characteristics of a dressing required by the wound can change as the wound moves through the different phases of the healing process. This means it is important to reassess the wound and dressing regimen regularly and not to order too many dressings at one time.

This formulary has been separated into different sections to enable staff to make the correct choices when managing patients with venous leg ulcers and/or chronic oedema with or without a wound or a palliative patient requiring compression. Please choose the correct system for the patient and follow the appropriate care pathway contained in this formulary. Where a satisfactory outcome is not achieved, practitioners should discuss care with NHS Borders Tissue Viability or Cancer Lymphoedema Service and following this, other products may be recommended based on a clear rationale and evidence base.

Please Remember prescribing outside of this formulary must be justified by a specific patient need and this will be monitored by Tissue Viability. Non-Formulary Request forms must be completed for each occasion a dressing is prescribed off formulary.

Please do not accept samples of dressings to try on patients without the consent of a Tissue Viability Nurse Specialist. Formulary to be reviewed in 2022.

Compression Bandaging

In the absence of significant arterial disease below-knee compression graduated from toe to knee, in the form of bandaging, is a key component for treatment of venous leg ulceration, chronic oedema or lymphoedema. Ensure appropriate guidelines are followed when assessing patients and selecting the most appropriate compression product. e.g. venous leg ulcer guidelines

Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Compression Bandaging	Actico™(Cohesive)	8cm x 6m	Inelastic cohesive compression bandages for the treatment and management of venous leg ulcers, lymphoedema and chronic oedema.	ABPI <0.8 - compression therapy should only be used under strict medical or vascular specialist supervision. If ABPI is >1.3 further investigation is to be required before compression is applied (refer to local guidelines). Not suitable for ankle circumference of less than 18cm unless padding is used to increase the ankle circumference to 18cm or more	Always ensure a full holistic assessment, incorporating an ABPI has been carried out to determine suitability for compression. As with all compression bandage systems, training on the correct application of Actico™ is required prior to use. Refer to manufacturer's instructions	As with all compression systems, caution is required when: - cardiac overload is suspected - patients have diabetes - advanced small vessel disease - arterial disease is present - renal failure is present Not suitable if latex intolerance is suspected
		10cm x 6m	Therapeutic working and tolerable resting pressure provide effective ulcer healing and oedema control.			
		12cm x 6m	Cohesive quality of the bandage allows for extended wear time, without slippage, for up to seven days. The 'Safe-Loc™' system enables consistent and accurate application.			
	Cellona™ Undercast Padding 2.75m unstretched	7.5cm	Provides padding underneath compression bandages and splints.	Known sensitivity to the material	Follow local guidance	The fibres are connected tightly enough for circular application
		10cm	Air-permeable, temperature-equalising and does not absorb moisture.			
		15cm	Contains 100% Polyester fibres.			
	Coban™ 2 multi-layer compression bandage kit	10cm x 3.5m	Coban™ 2-layer compression system (in the purple packaging) provides high compression (35-40mmHg) and is ideal for treating the patients with ABPI greater than or equal to 0.8	Contraindicated in patients with decompensated heart insufficiency and ABPI less than 0.5	Provides consistent compression, maintains a 'normal lifestyle' for patients as 2 thin conformable layers enabling patients to wear own clothes and shoes therefore often more practical for more mobile patients	Compression layer is applied at full stretch reducing application variability
	UrgoKTwo™ Full compression bandage kit	18-25cm (ankle circumference)	2 Layer Multi-layer, Multi-component Compression Bandage System that combines Elastic and Inelastic components.	Arterial Disease ABPI <0.8, Diabetes, microangiopathy, ischaemic phlebitis and septic thrombosis. Allergy to any components particularly latex, Ulceration caused by infection	Choose correct ankle size K Tech layer applied first (inelastic) then K press (elastic) Apply correct overlap 18-25cm 50% overlap. 25-32cm 2/3 overlap	Utilise Etalonage™ to oval to circle to apply correct compression
		25-32cm (ankle circumference)	Provides sustained full compression for up to 7 days. Treatment of Venous leg ulcers, Mixed aetiology leg ulcers, Oedema and Lymphoedema with ABPI >0.8			

Compression Bandaging Accessories

Reduced Compression Bandages, Toe Caps and Retention Bandages

When assessing for compression bandaging ensure an assessment of the foot is completed and any oedema in the foot or toes is compressed using toe bandaging / and or foot caps. Ensure appropriate guidelines are followed to assess patients and select the most appropriate compression product e.g. venous leg ulcer guidelines.

Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Compression Bandages	Coban™ 2 Lite	Multi – layer compression bandage kit	Two-layer bandage system designed for sustained therapeutic compression with reduced sub bandage resting pressure. Indicated for use in venous leg ulcers, lymphoedema and chronic oedema	Recommended for patients with ABPI >0.5	Apply inner comfort layer foam side against skin using enough tension to conform to let shape with minimal overlapping. Apply outer layer at full stretch	
	UrgoKTwo™ Reduced Compression bandage kit	18-25cm	2 Layer Multi-layer, Multi-component Reduced Compression Bandage System that combines Elastic and Inelastic components. Provides sustained Reduced graduated compression for up to 7 days.	Arterial Disease ABPI <0.6, Diabetes, microangiopathy, ischaemic phlebitis and septic thrombosis. Allergy to any components in particular latex, please order latex free version. Ulceration caused by infection	Choose correct ankle size K Tech layer applied first (inelastic) then K press (elastic) Apply correct overlap 18-25cm 50% overlap. 25-32cm 2/3 overlap	Utilise Etalionage™ to oval to circle to apply correct therapeutic compression levels
		25-32cm	Treatment of Venous leg ulcers, Mixed aetiology leg ulcers, Oedema and Lymphoedema with ABPI between 0.6 and 0.8			
Toe Caps	JOBST® Farrow® Toe Caps	XS – L 15 – 20mmHg or 20 – 30mmHg	The toe cap provides a gentle compression for patients with mild to moderate oedema. JOBST® Farrow® Toe Cap covers a broad range of patients. The comfortable fabric and ultra-thin seams ensure a high wearing comfort. Fine seams with ultra-thin and smooth compression fabric. Choice of colours and sizes.	Be careful not to remove too much of the toe length, when cutting	Position the toe cap so that it comfortably fits over the toes and foot. Work toe cap in between your toes to web space. If the toe lengths are too long, mark the toe at the appropriate length and remove the toe cap, then trim the length of the toe fabric to the marked area and reapply	Trimable. Can be worn together with JOBST® FarrowWrap® foot piece. Can be used on either foot
Retention Bandages	ActiFast™ Red Line	3.5cm x 1m	The bandage is extremely versatile and can be used as a bandage liner to ease the problem of contact sensitivity, in the wet wrapping technique, to secure, cover and retain dressings or to keep ointments in place.	Safe to use where compression is contraindicated	Easy to apply and can be cut to size and shape	Hand washable
	ActiFast™ Green Line	5cm x 3m				
	ActiFast™ Green Line	5cm x 5m				
	ActiFast™ Blue Line	7.5cm x 3m				
	ActiFast™ Blue Line	7.5cm x 5m				

Compression Hosiery – Hosiery Kits

For use in the management and prevention of the reoccurrence of venous leg ulceration.

Complete holistic leg ulcer assessment including Doppler prior to application.

Risk factors to consider include: ABPI results, indicating arterial disease, intermittent claudication, pain at rest, capillary refill, warmth of feet, cardiac disease and diabetes.

See venous leg ulcer guidelines.

Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Compression Hosiery – Hosiery Kits	JOBST® UlcerCARE™ Hosiery Kit 1 x Stocking 2 x Liners	Small – 4XLarge	JOBST® UlcerCARE™ consists of two components, a medical stocking and a compression liner. Together these provide a gradient compression of 40mmHg at the ankle. It is designed for patient's self-management and allows for improved personal hygiene and minimum disruption to patient's lifestyle, e.g., functional with normal footwear and clothing.	ABPI Less than 0.8 & more than 1.3 Should be used with extreme caution and applied only after specialist referral and under strict supervision. <ul style="list-style-type: none"> Diabetic patients - unless after specialist referral and under strict supervision Significant arterial disease (ischaemia) according to vascular assessment Congestive cardiac failure as compression could lead to cardiac overload Renal failure Other Considerations <ul style="list-style-type: none"> Known sensitivity to the fabric of the stockings This system may be unsuitable where there is heavy exudate For distorted or irregular shaped limbs, it may be more appropriate to use compression bandages Padding and bandages are recommended for patients with very small limbs or with bony prominences 	A full holistic assessment is required prior to application. The silky, easy to apply liner goes on first. The liner holds dressings in place and helps the second layer to go on easily. A second compression layer is added over the liner to achieve therapeutic pressure for venous leg ulcer healing. Refer to manufacturer's instructions.	Following a full holistic assessment, they can be reapplied by the patient, carer and other members of the multi-disciplinary team where appropriate.
	JOBST® UlcerCARE™ Replacement Liners 3 x Liners 15-20mmHg	Small – 4XLarge	The JOBST® UlcerCARE™ Compression Liner, as well as holding the wound dressing in place, provides mild compression for non-ambulatory patients and can be worn for 24 hours per day See Leg Ulcer Treatment Algorithm			
	L&R™ Activa™ British Standard Hosiery Kit 1 x Stocking 2 x Liners	Small - XXL	Treatment of Venous Leg Ulcers & Chronic Venous Insufficiency		After 3 months of wear a new prescription is required.	After 3 months of wear a new prescription is required.
	L&R™ Activa™ Replacement Liners 3 x Liners 10mmHg	Small – XXL Available in Open & Closed Toe Styles and 3 colours.	Liners provide light compression for maintenance therapy, palliative care and patients non concordant with higher compression levels		A donning aid may be prescribed to aid donning of the stocking	A donning aid may be prescribed to aid donning of the stocking

Compression Hosiery - RAL Standard

RAL standard compression hosiery is recommended for patients with lower leg oedema or lymphoedema associated with or without ulceration. Can also be used for vascular disease.

Complete holistic lower limb assessment including Doppler prior to application.

Risk factors to consider include: ABPI results, indicating arterial disease, intermittent claudication, pain at rest, capillary refill, warmth of feet, cardiac disease and diabetes.

Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Ready-to-Wear Compression Hosiery	JOBST® UltraSheer RAL CCL1-2	Knee High Size 1 – 6 Petite or Regular	JOBST® UltraSheer: RAL CCL1-2 Ready-to-wear, circular-knit hosiery for the treatment of MILD oedema and venous disease. The fine yarns deliver superior breathability and moisture management making the garments more comfortable to wear.	<p>JOBST® Ready-to-Wear compression garments are contraindicated when any of the following conditions are present:</p> <ul style="list-style-type: none">Severe arterial insufficiencyUncontrolled congestive heart failureUntreated infection <p>Occasionally, the wearing of compression garments can lead to problems in the following cases:</p> <ul style="list-style-type: none">Immobility (confinement to bed)Skin infectionsWeeping dermatosesIncompatibility to fabricImpaired sensitivity of the limb (e.g.: in diabetes mellitus)Primary chronic polyarthritis	Application instructions included in every pack <ul style="list-style-type: none">Step-by-step, easy to follow directions with every garment orderedHelps the patient retain independence and dignityReduces the risk of incorrect application technique, leading to skin problems or trauma	Following a full holistic assessment, they can be reapplied by the patient, carer and other members of the multi-disciplinary team where appropriate.
		Thigh High Size 1 – 6 Petite or Regular				
		Tights Size 1 – 6 Petite or Regular				
	JOBST® Opaque RAL CCL1-2	Knee High Size 1 – 6 Petite or Regular	JOBST® Opaque: RAL CCL1-2 Ready-to-wear, circular-knit hosiery for the treatment of MILD to MODERATE oedema and venous disease. The Nilit Aquarius fibres effectively wick away moisture; the double-covered inlay yarns make JOBST® Opaque incredibly easy to don.			
		Thigh High Size 1 – 6 Petite or Regular				
		Tights Size 1 – 6 Petite or Regular				
	JOBST® forMen Explore RAL CCL1-2	Knee High Size 1 – 6 Regular or Long	JOBST® forMen Explore: RAL CCL1-2 Ready-to-wear, circular-knit compression sock with high cotton content for increased comfort and durability.			
	JOBST® forMen Ambition RAL CCL1-2	Knee High Size 1 – 6 Regular or Long	JOBST® forMen Ambition: RAL CCL1-2 Ready-to-wear, circular-knit compression sock with ribbed design for a more natural appearance.			

Compression Hosiery – British Standard

British Standard Compression Hosiery for the treatment of venous conditions without oedema. (No Swelling)

Complete holistic lower limb assessment including Doppler prior to application.

Risk factors to consider include: ABPI results, indicating arterial disease, intermittent claudication, pain at rest, capillary refill, warmth of feet, cardiac disease and diabetes.

Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Ready-to-Wear Compression Hosiery	Activa™ British Standard Compression Hosiery CCL 1 - 2	CCL 1-2 Thigh length (open or closed toe) Below knee (open or closed toe) Sizes S, M, L, XL, XXL	British Standard Hosiery is for use on legs without oedema CCL 1 – Provides light compression and should be used for superficial or early varicose veins and swollen ankles (e.g. during pregnancy). CCL 2 – Provides medium compression and should be used in moderately severe varicose veins and mild oedema, including varicose during pregnancy	Significant arterial disease (ischaemia) according to vascular assessment Current acute inflammatory episode Acute deep vein thrombosis Patients with diabetes or rheumatoid arthritis unless after specialist referral and under supervision, due to risk of microvascular disease Congestive heart failure, as compression could lead to cardiac overload Sensory disorders of the limb i.e. peripheral neuropathy Known sensitivity to the fabric Large or irregular shaped limbs	Refer to manufacturer's instructions. British Standard Hosiery is for use on legs without oedema	CCL1 hosiery should also be considered post operatively and on long distance travel to help prevent deep vein thrombosis in normal risk groups. CCL2 hosiery should also be considered post operatively and on long distance travel to help prevent deep vein thrombosis in high risk patients

Compression Hosiery - Custom Fit

RAL standard compression hosiery is recommended for patients with lower limb oedema or lymphoedema associated with or without ulceration. Can also be used for vascular disease.

Complete holistic leg ulcer assessment including Doppler prior to application.

Risk factors to consider include: ABPI results, indicating arterial disease, intermittent claudication, pain at rest, capillary refill, warmth of feet, cardiac disease and diabetes.

Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Custom-Fit RAL Compression Hosiery	JOBST® Elvarex® Custom Fit RAL CCL 1-4S	Refer to JOBST® Elvarex® Custom Fit Measuring Form	JOBST® Elvarex®: Custom-fit, compression garment, RAL CCL 1-4S Custom-fit, flat-knit garments for the management of MODERATE to SEVERE chronic oedema. Firm material providing graduated compression with high resistance, especially important for more stubborn oedema and rebound oedema. Flat-knit fabric does not work in at skin folds but lays flat against the skin	<p>JOBST® Custom Fit compression garments are contraindicated when any of the following conditions are present:</p> <ul style="list-style-type: none"> • Severe arterial insufficiency • Uncontrolled congestive heart failure • Untreated infection <p>Occasionally, the wearing of compression garments can lead to problems in the following cases:</p> <ul style="list-style-type: none"> • Immobility (confinement to bed) • Skin infections • Weeping dermatoses • Incompatibility to fabric • Impaired sensitivity of the limb (e.g.: in diabetes mellitus) • Primary chronic polyarthritis 	<p>Application instructions included in every pack</p> <ul style="list-style-type: none"> • Step-by-step, easy to follow directions with every garment ordered • Helps the patient retain independence and dignity • Reduces the risk of incorrect application technique, leading to skin problems or trauma 	<p>Following a full holistic assessment, they can be reapplied by the patient, carer and other members of the multi-disciplinary team where appropriate. Ensure appropriate footwear is worn by patients to prevent falls.</p>
	JOBST® Elvarex® Soft RAL CCL 1-3	Refer to JOBST® Elvarex® Custom Fit Measuring Form	JOBST® Elvarex® Soft: Custom-fit, compression garment, RAL CCL 1-3 Latex free, custom-fit, flat-knit garments for the management of MILD to MODERATE chronic oedema. Skin-protecting softness and excellent breathability makes the garments particularly well suited for patients with dry, sensitive or fragile skin* *JOBST® Elvarex Soft: is not suitable for patients with severe levels of chronic oedema.			
	JOBST® Elvarex® Plus RAL CCL 1-2	Refer to JOBST® Elvarex® Plus Measuring Form	JOBST® Elvarex® Plus: Custom-fit, compression garment, RAL CCL 1-2 Custom-fit, flat-knit foot-caps for the management of chronic oedema			
	JOBST® Elvarex® Soft Seamless RAL CCL 1-2	Refer to JOBST® Elvarex® Soft Seamless Measuring Form	JOBST® Elvarex® Soft Seamless Latex free, custom-fit, flat-knit foot-caps for the management of chronic oedema			
Custom Fit Compression Hosiery European Standard	ActiLymph™ MTM European Class CCL 1-3	Refer to ActiLymph™ Measuring Form	Provides medium compression and can be used in cases of mild to severe chronic oedema or lymphoedema	<ul style="list-style-type: none"> • Arterial Disease according to vascular assessment • Current Acute inflammatory episode • Acute deep vein thrombosis • Primary chronic polyarthritis • Patients with diabetes or rheumatoid arthritis unless after specialist referral under supervision due to risk of microvascular disease • Congestive heart failure as compression could lead to cardiac overload • Sensory disorders of the limb i.e. peripheral neuropathy • Known sensitivity to the fabric 	Refer to manufacturer's instructions	

Compression Wrap Systems

Compression wrap devices are recommended for patients with lower limb oedema and/or lymphoedema, also for the management of venous disease.

Complete holistic leg ulcer assessment including Doppler prior to application.

Risk factors to consider include: ABPI results, indicating arterial disease, intermittent claudication, pain at rest, capillary refill, warmth of feet, cardiac disease and diabetes

Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Wrap Compression Systems	JOBST® FarrowWrap® 4000 Kit 40mmHg	Leg Piece & Sock XS - L (Regular & Tall)	JOBST® FarrowWrap® 4000 provides even compression of 30-40mmHg for patients with mild to moderate venous and lymphatic conditions, with or without a leg ulcer present.	NOT be worn if you have the following medical conditions: <ul style="list-style-type: none">Moderate to severe arterial diseaseMild arterial disease in the presence of peripheralNeuropathy Untreated vein infection (septic phlebitis)Uncontrolled (decompensated) congestive heart failureUntreated and / or advancing skin infection (cellulitis) involving the feet or legsLarge blood clot in the vein of the leg (phlegmasia coerulea dolens)	Follow application Instructions on leaflet in packaging	Fold Velcro™ back on itself before application, when taking garment off to aid donning and doffing and before washing. Liners supplied with each wrap piece
	JOBST® FarrowHybrid® Sock (pairs) 20-30mmHg	XS - XL (Regular & Wide)	Foot swelling is addressed with the JOBST® FarrowHybrid®, providing compression from foot to ankle			
	JOBST® FarrowWrap® Lite 20-30mmHg	Foot Piece XS – XL (Regular & Long)	JOBST® FarrowWrap® is a wrap compression system that consists of a liner and an outer wrap piece.			
		Leg Piece XS - XL (Regular & Tall)				
		Thigh Piece (Incl Knee) XS - XL (Short, Regular & Tall)				
	JOBST® FarrowWrap® Classic* 30-40mmHg	Foot Piece XS – XL (Regular & Long)	How does JOBST® FarrowWrap® achieve compression? <ul style="list-style-type: none">Special fabrics comprised of layers of fabricSmart, elastic, short-stretch bandsTop to bottom band overlapOptimal band width			
		Leg Piece XS - XL (Regular & Tall)	Indications are for lymphoedema, chronic oedema, chronic venous insufficiency & Leg Ulcer Management* (Classic & Strong Only)			
		Thigh Piece (Incl Knee) XS - XL (Short, Regular & Tall)				
	JOBST® FarrowWrap® Strong* 30-40mmHg	Foot Piece XS – XL (Regular & Long)				
		Leg Piece XS - XL (Regular & Tall)				
		Thigh Piece (Incl Knee) XS - XL (Short, Regular & Tall)				

Compression - Continued

Compression wrap devices are recommended for patients with lower limb oedema and/or lymphoedema, also for the management of venous disease.

Complete holistic leg ulcer assessment including Doppler prior to application.

Risk factors to consider include: ABPI results, indicating arterial disease, intermittent claudication, pain at rest, capillary refill, warmth of feet, cardiac disease and diabetes

Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Wrap Compression Systems	ReadyWrap™	Foot Wrap Left / Right	Adjustable, short-stretch compression garments with VELCRO™ brand fasteners are designed for an easy to use compression therapy for patients with Venous Leg Ulcers, Venous disease, Chronic oedema and Lymphoedema. Available in Black or Beige.	<p>The system may be unsuitable when there is heavy exudate and for large wounds</p> <p>As with all compression systems caution is required when:</p> <ul style="list-style-type: none"> • Cardiac overload is suspected • Patients have diabetes • Patients have advanced small vessel disease • Arterial disease is present • Renal failure is present • Rheumatoid arthritis is present • Following application if the patient shows signs of pain reduced colour or numbness to their extremities then it should be removed immediately 	Follow application Instructions on leaflet in packaging	<p>Not suitable for ankle circumference less than 18cm unless padding is used to increase the ankle circumference to 18cm or more.</p> <p>Hand wash only and dry flat</p>
		Calf Wrap S - XXL				
		Knee Wrap S - XXL				
		Thigh Wrap S - XXL				
Compression Shoe	ReadyWrap™ Extender Strap	One length	Adds an additional 10cm to a standard ReadyWrap strap. Y clamp design ensures a secure fit. Compatible with ReadyWrap Calf, Knee & Thigh Units			
	Cellona Shoe	Paediatric, XS, S, M, L, XL	A walking shoe to accommodate bandages and casts, and to offload pressure from the foot. Provides stability, protection and comfort.	No known contraindications		Can be adjusted to either open or closed toe.

Additional Products ONLY to be used under instruction from Cancer Lymphoedema or TVN Service

Complete holistic leg assessment.

Risk factors to consider include: Indicating arterial disease, intermittent claudication, pain at rest, capillary refill, warmth of feet, cardiac disease and diabetes

British standard compression hosiery is recommended for patients with mild lower leg oedema without ulceration

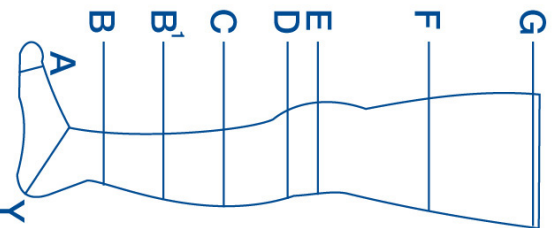
Product Category	Product Name	Sizes	Use	Precautions / Contraindications	Application	Tips
Compression Wrap Systems	Juzo™ ACS	Foot Piece XS - XL (Normal & Long)	Lymphoedema Lipoedema Phleboedema Post-traumatic oedema Postoperative oedema	Please refer to manufacturer instructions	Please refer to manufacturer application guide	
		Calf Piece XS - XL (Normal & Long)				
		Knee Piece XS - XL (Normal)				
		Thigh Piece XS - XL (Normal & Long)				
	Juxta-Fit™	Ankle Foot Wrap S, M & L	The Juxta-Fit is an inelastic, adjustable compression garment for the management of lymphoedema. It is made from Breath-O-Prene fabric for a flexible and comfortable fit and is also latex free. <ul style="list-style-type: none"> • effective self-care • graduated profile • alternating band system for easy application • minimal adjustments • low resting pressure • high working pressure • latex-free 	Please refer to manufacturer instructions	Please refer to manufacturer application guide	
		Lower Legging S-XXL (28cm & 36cm)				
		Lower Legging Extra Wide Calf M, L, XL (28cm & 36cm)				
		Upper Leg with Knee Piece (Right, Left) XS-XL (45cm & 55cm)				
Toe Bandages	Mollelast™ Toe Bandages	4cm x 4cm	Highly conformable retention bandage for prevention and management of forefoot and toe oedema and can be used as a retention bandage to hold dressings in place	Avoid in patients with peripheral neuropathy e.g. patients with diabetes who may be unable to detect if bandages are causing trauma	Always refer to manufacturer's application instructions	Careful consideration should be taken in older patients with impaired mobility/ dexterity as if cause pain or trauma they may be unable to remove independently
Four Layer Bandaging	Profore multi-layer compression bandage kit	18cm - 25cm 25cm - 30cm	Multi layer compression bandage system to apply sustained graduated compression for the management of venous leg ulcers and associated conditions	Do not use on patients with and ABPI of <0.8 or on diabetic patients with advanced small vessel disease	Measure ankle circumference to confirm size of kit required Foot must be flexed for application of bandages Apply wound contact layer	Profore #1 apply padding Profore #2 apply using spiral application with 50% overlap Profore #3 Anchor bandage with 2 wraps around the foot then apply up the leg in Figure 8 using the yellow line at your 50% overlap Profore #4 Apply using spiral technique with 50% overlap

Glossary

Short Stretch Bandaging	Also known as inelastic bandages. Stretch is limited. Delivers high working low resting pressure – will not yield when the calf muscle expands giving steep rise in sub bandage pressure during exercise and subsequent increase in venous return due to the action of the calf muscle pump. Low resting pressure ensures minimal constriction of superficial veins when muscles relax so allowing veins to refill.
Long Stretch Bandaging	Also known as elastic bandaging. Long stretch bandages contain Elastomeric Threads – this provides a memory to the bandage and these threads are always trying to get back to the original relaxed position prior to stretching. Exerts high working and high resting pressure therefore suitable for less mobile patients who cannot activate calf muscle pump as easily.
Multilayer Bandaging	Considered to be the Gold Standard treatment in the treatment of VLU. Bandages are applied in a specific order either in spiral or figure of 8. Aids venous return by assisting the action of the calf muscle pump and helps reduce oedema. Some multilayer systems contain both elastic and inelastic bandage components.
British Standard	Manufacturing standard that companies need to conform to regarding yarns, labelling, product durability (wash/wear) and compression profile. The specifications standardises and regulates the category as a medical compression garment. This applies to provision of Class I, II and III graduated compression garments.
RAL	German Standard of graduated compression, Guarantees highest quality of medical compression stockings. RAL is recognised by the International Lymphoedema Framework as the recommended compression class in treating swelling. RAL has 4 classes of compression 1,2,3,4
Wraps	May be considered as an alternative to bandaging or compression hosiery in the management of chronic swelling from lymphatic or venous conditions. They have similar short stretch properties to multilayer bandaging in that they have low resting and high working pressure. They are designed for ease of use which enables patients to be independent and self apply and adjust as swelling reduces.
Hosiery Kits	Easy to use 2 in 1 compression system for managing / prevention venous leg ulcers and designed to provide minimum disruption to your lifestyle. 2 components – outer medical compression stocking and a compression liner. For use in normal shaped limbs.
Flat-knit hosiery	Less elastic and has a higher static stiffness than circular knit hosiery. This will reduce the possibility of rebound oedema. This hosiery is made-to-measure and is knitted flat and sewn together to create an anatomically correct garment. This lays flat against the skin and will not dig in at skin folds or cause a tourniquet effect.
Circular Knit hosiery	Knitted as a tube. Have a seamless finish and are more cosmetically acceptable and comfortable. However some wearers may experience problems such as rolling or digging in, particularly if there is oedema present.
Wadding	A very soft bandage made from a cotton wool type product. It is used for shaping a leg under compression bandages and for protection of any bony prominences.

Supporting Information

Definitions of measuring points



- G: Circumference at widest part of upper thigh, below gluteal fold
- F: Middle of thigh
- E: Middle of patella / back of knee
- D: Fibula head (two finger-widths below patella)
- C: Maximum circumference of calf
- B': Transition to calf (Achilles tendon)
- B: Narrowest circumference above ankle
- Y: Heel / ankle flex with maximum dorsiflexion
- A: Metatarsal joint of toe

Tips for measuring
Try to measure first thing in the morning when oedema is at its minimum or immediately after removing compression garment
Take measurements directly against the skin for accuracy
If the patient has skin folds, do not measure into skin folds but place tape measure on top of skin fold
Take measurements for each leg as they may differ in size

Vascular assessment ABPI / TBPI

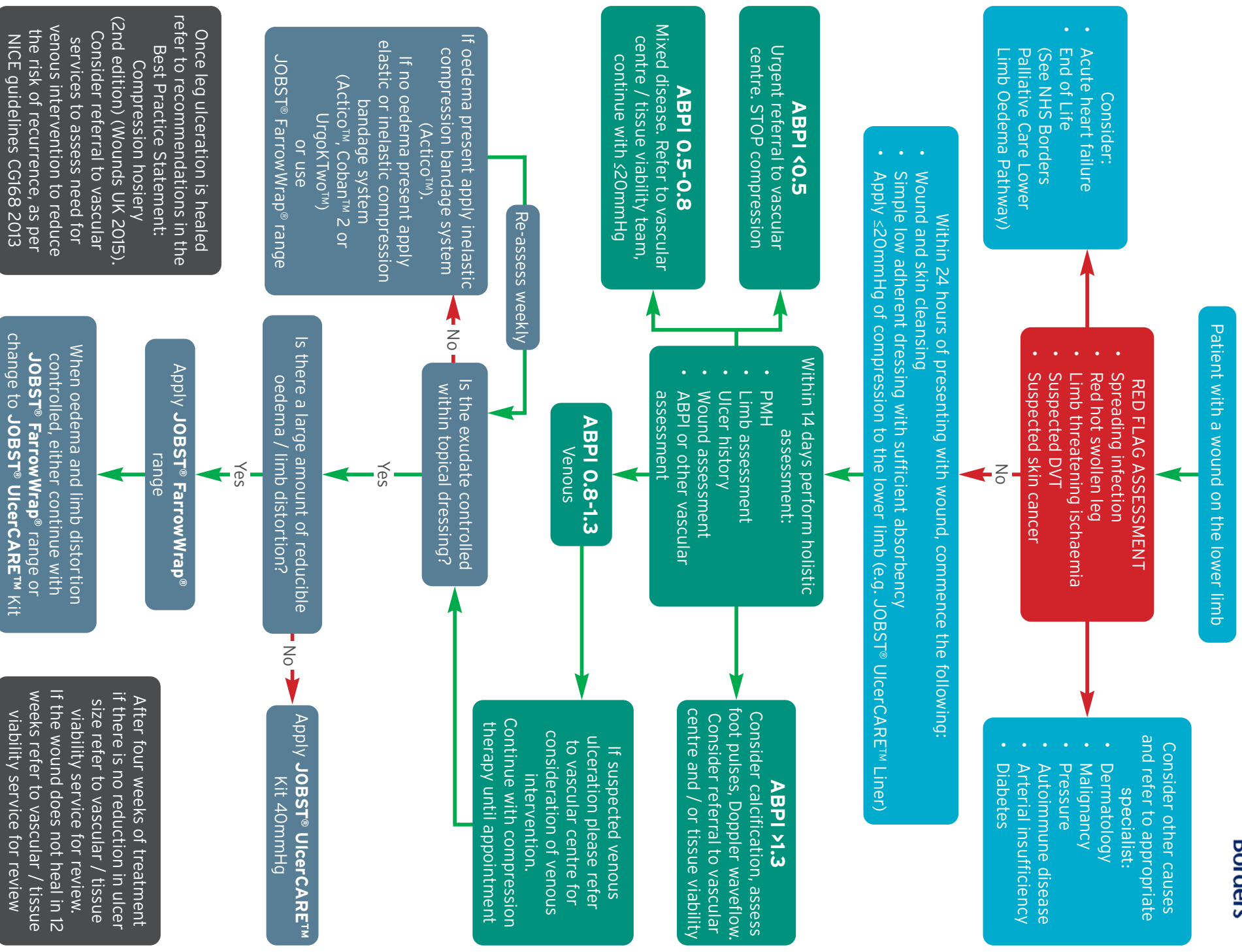
Full Compression	Reduced Compression	Vascular Referral
No arterial risk	Mixed arterial risk	Arterial disease
ABPI 0.8 - 1.4	ABPI 0.5 - 0.8	ABPI <0.5
TBPI >0.7	TBPI 0.64 - 0.7	TBPI <0.64

RAL classification

RAL CCL	mmHg
CCL 1	18 - 21
CCL 2	23 - 32

For more product information please contact:
 Essity at 01482 670100
 L&R at 01283 576800

Leg Ulcer Treatment Algorithm



Palliative Lower Limb Oedema Algorithm

Perform a full holistic assessment.

If there are signs of spreading infection - Do not continue with this pathway refer to NHS Borders Wound Infection Framework.

If patient presents with grossly oedematous limbs - Do not continue with this pathway, refer to Cancer Lymphoedema Service.

If there is a suspected DVT or skin cancer - Do not continue with this pathway refer to appropriate Healthcare Professional ASAP

Suitable for light compression.
There is no reason why light compression cannot be applied.

Is circulation good (no evidence of limb threatening ischaemia)?
Feet are warm and they have a good capillary refill?

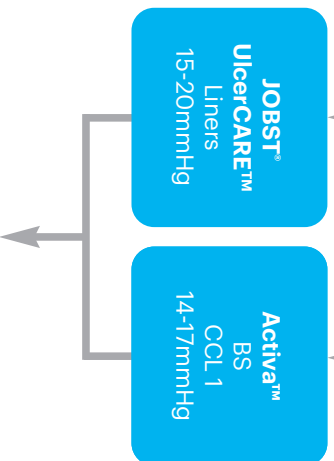
Light compression unsuitable.
Contact Cancer Lymphoedema Service for advice

Compression therapy

Below knee oedema:
Measure ankle and calf

Full leg oedema:
Measure ankle, calf and mid-thigh

Compression to be applied in the morning and removed at night



Think

Donning / doffing aids (Marigold™ gloves)

Patient education and advice to reiterate importance of skincare

If pelvic / scrotal oedema becomes apparent, obtain advice from Cancer Lymphoedema Service

Essential advice for patient and carer

Maintain skin integrity
Wash and cream leg and foot daily
Dry in-between toes
Apply emollient at night
Observe for infections

Encourage movement - ankle rotations, ankle flexes, wiggling toes

Elevate legs when possible, higher than hip level

Encourage patient goes to bed at night

Check for suitable, supportive footwear

Things to consider

It is everyone's responsibility to identify, treat and manage this symptom.

Prevent skin breakdown through good skin care regime

Who will apply / remove hosiery?

Can you feel pedal pulse? If not - don't panic. If circulation is good with warm feet and good capillary refill put in recommended compression and monitor

When to seek advice from Cancer Lymphoedema Service

Scrotal / Pelvic Oedema

Oedema in toes

Leaking legs (lymphorrhoea)

Patient's leg too large for ready-to-wear garments

Leg swelling not being maintained by garments suggested

Lower Limb Mild Oedema Algorithm

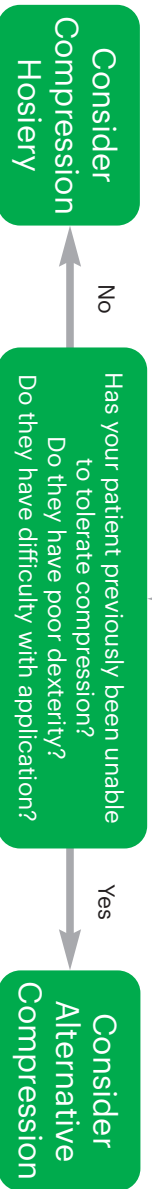
Perform a full holistic assessment.

If there are signs of spreading infection - Do not continue with this pathway refer to NHS Borders Wound Infection Framework.

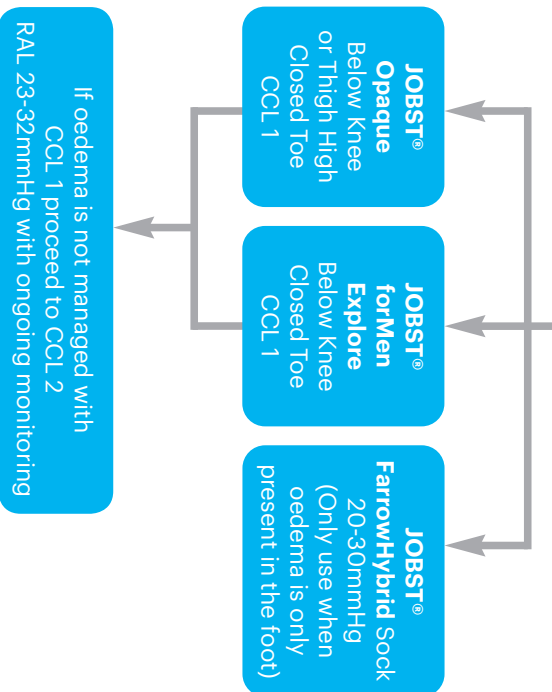
If patient presents with grossly oedematous limbs - Do not continue with this pathway, refer to Cancer Lymphoedema Service.

If there is a suspected DVT or skin cancer - Do not continue with this pathway refer to appropriate Healthcare Professional ASAP

Is circulation good (no evidence of limb threatening ischaemia)? Feet are warm and they have a good capillary refill?

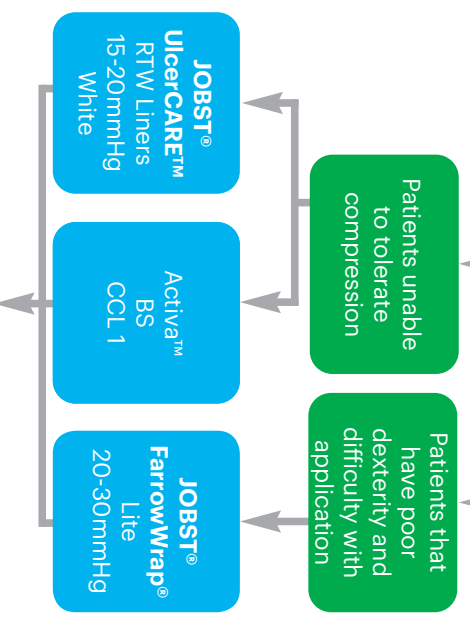


Measure patient according to sizing chart for preferred garment choice below
Start with **CCL 1 RAL 18-21 mmHg**



If oedema is not managed with CCL 1 proceed to CCL 2
RAL 23-32mmHg with ongoing monitoring

Measure patient according to sizing chart for preferred garment choice below



If oedema is not managed contact Cancer Lymphoedema Service or Tissue Viability Service. When to contact Cancer Lymphoedema Service. or Tissue Viability Service for advice

Essential advice for all patients and carers

To maintain skin integrity wash and cream leg and foot daily

Apply emollient at night

Encourage movement – ankle rotations, ankle flexes, wiggling toes

Elevate legs when possible higher than hip level

Encourage patient to go to bed at night

Observe for infection

Appropriate footwear to prevent falls

Education and advice on application and removal of compression garments (e.g. use of marigold gloves etc)

Risk factors when assessing vascular status

ABPI / TBPi results indicating arterial disease

Intermittent claudication

Pain at rest

Capillary refill > 3 seconds

Blanching on elevation

Are feet warm to touch?

Cardiac disease

Diabetes

Rheumatoid Arthritis

Smoking

Over the age of 80 years

CVA / mini stroke

When to contact Cancer Lymphoedema Service for advice

Scrotal / pelvic oedema

Oedema in toes

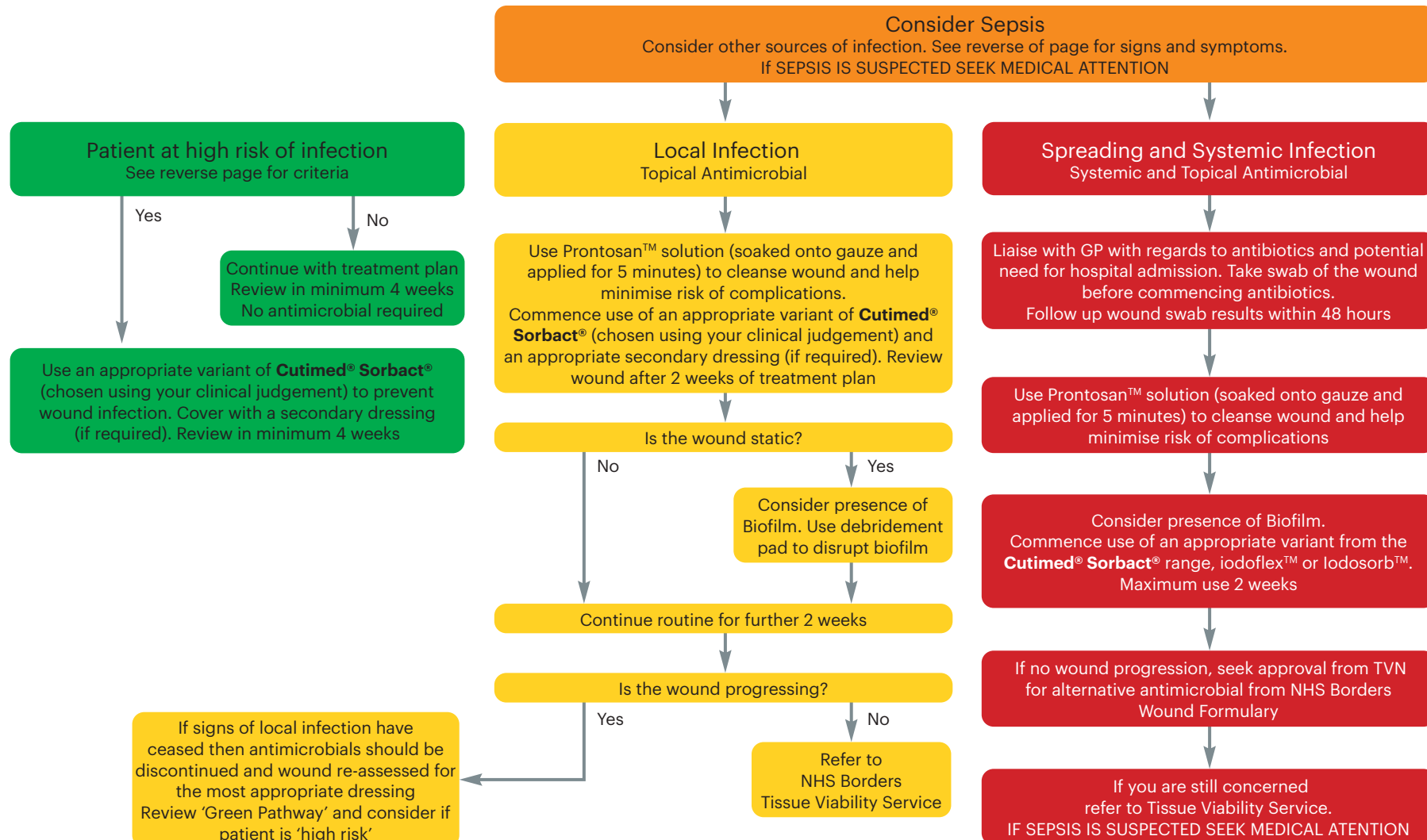
Leaking legs (lymphorrhoea)

Patients leg too large for ready-to-wear garments

Leg swelling not being maintained by garments suggested

Wound Infection Framework

Health Care Professionals must complete a holistic assessment and wound assessment (using TIMES framework)
It is the responsibility of the Health Care Professional to document the wound assessment, rationale for treatment and next wound assessment date in patient records
If the wound is on the Lower Limb, please use in conjunction with the Leg Ulcer Treatment Algorithm



Holistic Assessment of the Patient

Consider the following:

- Nutritional status including fluid intake
- Comorbidities - Are they being managed effectively?
- Medication regimes
- Concordance - Is there anything that is preventing compliance / concordance?

Cellulitis Guidelines

Diagnosis will include an assessment of the patient highlighting the following:

- High or low temperature - feeling generally or systemically unwell
- Painful, hot, swollen limb - Skin may have a glossy, tight appearance. Blisters may also be present
- Look for a skin break where the infecting organism may have entered
- Mark around the erythema with a pen to monitor spreading
- Look for early signs of sepsis and if suspected contact the GP urgently, or if appropriate call for an ambulance
- Cellulitis can often be misdiagnosed and could be:
 - Lipodermatosclerosis - Hardened, tight, red or brown skin; typically affecting the inner aspect of the calf
 - Venous eczema - Red, scaly or flaky skin which may have blisters and crusts on the surface

Antimicrobial Choice

The use of antimicrobial wound care products must have been discussed with the case load holder, clinical reasoning form completed and reviewed in 2 weeks.

N.B if using the Green or Amber pathway, proceed with instructions as detailed

What is a High Risk Patient?

- Comorbidity that alters a patient's immune response
- Medications that can alter a patient's immune response (Chemotherapy)
- Patient who has had 2 or more infections within the same wound previously
- Diabetic patients - Type 1 and 2

Signs and Symptoms of Wound Infection

Local infection

- Hypergranulation
- Bleeding friable granulation
- Epithelial bridging and pocketing in granulation tissue
- Wound deterioration
- Delayed wound healing beyond expectation
- New or increasing pain
- Increased malodour
- Redness around the wound

Spreading Infection and / or Extending Induration

- Lymphangitis Crepitus
- Wound breakdown / dehiscence with or without satellite lesions
- Malaise
- Loss of appetite
- Inflammation, swelling of lymph glands
- General deterioration

Systemic infection

- Severe sepsis
- Septic shock
- Organ failure
- Death

Signs of Sepsis: Red flags

Sepsis is a life-threatening condition in which the body's response to infection causes injury to its tissues and organs. Organ dysfunction is a key component in any diagnosis of sepsis (The UK Sepsis Trust).

Act on a Red Flag assessment

- S** = Slurred speech or confusion
- E** = Extreme shivering or muscle pain
- P** = Passing no urine (in a day)
- S** = Severe breathlessness
- I** = It feels like you're going to die
- S** = Skin mottled or discoloured

For more guidance refer to the National Early Warning Score (NEWS2) - Standardising the assessment of acute-illness severity in the NHS

Wound Assessment TIMES

T = Tissue type:

Viable - continue as healthy granulation tissue present

Non-viable - consider debridement options before continuing treatment

I = Inflammation or Infection - review pathway if wound is infected

M = Moisture levels - aim for a moist wound healing environment

E = Edge of the wound - is epithelisation present?

S = Surrounding Skin - appropriate skin care should be preferred

If no progress observed, review wound at **T** of **TIMES**

Suspected Biofilm in the Chronic Wound:

Are any of the following present:

- Absence of healing progression, even though all obvious comorbidities and wound management issues have been addressed
- Visible, slimy, gel like and shiny material on the surface of the wound bed which detaches easily and atraumatically from the wound bed
- Quick re-forming of slough, despite debridement
- Increase in exudate
- Poor quality granulation tissue possibly fragile and / or hypergranulation
- Signs of local infection (as Biofilm is a precursor to infection) e.g. heat, redness, swelling, pain, odour

References:

Antimicrobials made easy. Wounds International, (2011), Vol 2 (1) www.woundsinternational.com

Antibiotic Resistance: we must act now Says WHO NHS Choices. (2012) Nursing times.

Best Practice Statement: The use of topical antiseptic / antimicrobial agents in wound management. 3rd edition. (2013). Wounds UK.

NICE. (2015). Cellulitis acute. Available: <http://cks.nice.org.uk/cellulitis-acute!topicsummary>. Last accessed 06/09/2016.

CREST (2005) Guidelines on the management of cellulitis in adults. Clinical Resource Efficiency Support Team. www.gain.ni.org

NEWS2, 6 steps of Sepsis <https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score>. UK Sepsis Trust

Created by NHS Borders Tissue Viability Service, adapted from Northern Lincolnshire and Goole Infection Framework - Alison Schofield Tissue Viability Nurse
Framework Produced in reference to - "International Wound Infection Institute (IWII) Wound infection in clinical practice. Wounds International 2016"