NHS Greater Glasgow and Compression Bandage Formulary 2015/16

Primary Care and Acute Joint Formulary

Compression Bandage care formulary, product data and prescribing guidance developed by the Compression Bandage Formulary and Implementation group. The Compression Bandage formulary is to be monitored by the Therapeutics subgroup of the Area Drugs and Therapeutics Committee.

Review date: September 2017

P – Preferred List **T** – Total List

Disclaimer – seek further information on products from manufacturer's instruction leaflet enclosed in pack

Foreword

This formulary and the accompanying compression management data sheets have been developed as a guide to aid Healthcare Professionals in selecting the most appropriate products to use in practice.

Implementing a compression bandage formulary provides treatment choices for patients with chronic venous insufficiency (CVI) and venous ulceration. Compression bandage choices can be adapted to be safely used in mixed aetiology leg ulcers and provision of paste bandages, when required to treat patients with complex needs. Products have been assessed as suitable for use, and cost effectiveness; acceptable to patients/clinicians; and, supported by a strong evidence base.

The NHS Greater Glasgow and Clyde Compression Bandage Formulary was developed by the ADTC Therapeutic Short Life Working Group. It supports the strategic aim of Releasing time to Care (RTC) (Healthcare Improvement Scotland 2012); and SIGN 120 Management of Chronic Venous Leg Ulcers: (2010), to ensure safe consistent and reliable care to patients.

Practitioners should aim to use a product included in the Formulary in most cases and only use a non-formulary product when there is a good clinical reason for doing so. If prescribing a non formulary product or if clinicians wish to have a new/different product considered for inclusion on the formulary (or to provide feedback on current products) a non-formulary/product evaluation form must be completed.

When using the formulary prescribers should follow the principles of mindful prescribing, taking into account the volume and duration of products prescribed and maintaining a two week challenge/review/reassessment of wounds where appropriate. It is recognised that variations in product choice may occur for small number of patients with complex aetiology and special needs.

In order to support clinicians in their practice and demonstrate the effectiveness of the formulary, quarterly monitoring of prescribing activity will be carried out with focus on Prescribing Information System for Scotland (PRISMs) reports. The compliance to formulary can provide indicators on the most frequently used products on formulary and identify any variations in practice. This can support the ADTC Therapeutics Sub Group and vascular nurse specialist team identify those areas which may require greater support as well as share best practice. This will also provide a means for individuals to self audit their own practice.

In line with NHSGGC Safe Use of Latex Policy; a latex free option is included for each product category for those who require it. Clinicians must also risk assess for any other potential allergens prior to use of products.

The compression bandage formulary will follow similar structure to NHSGGC Formularies being preferred first line choices for treatment, suitable for the majority of patients with CVI or venous leg ulcers. Total list includes bandage kits, latex free options and paste bandages when required. The formulary products will only be applied by those clinicians who are competent in the holistic management of patients with CVI and venous ulcers.

Siganture	Signature	Signature
Gavin Gorman	Steven Long	Lynn Welsh
NMP Lead	Podiatry Team Lead (East)	Vascular Nurse Specialist

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NHSGGC Compression Bandage Formulary Summary Table

	Bandage	Unit size		
	Bandage Category 1: Short Stretch Inelastic Bandages			
P	Actico® (Activa) cohesive bandage	10cm x 6m	6m x 12cm	
T	Actico 2C® (Activa) cohesive kit**	18 – 25cm	25 -30 cm	
	Bandage Category 2: Multi-layer Elastic/Inelastic Kits			
	Sub-Category 1: Two-layer Elastic/Inelastic Kits			
P	KTwo® (Urgo) cohesive kit	10cm x 7.5m ankle circ. 18 – 25 cm	7.5m x 10cm ankle circ. 25 – 32 cm	
T	Coban2® (3M) cohesive kit**	one size		
	Sub-Category 2: Single Components to create multi-layer elastic bandage combination			
	Multi- layer 1: Sub compression wadding			
P	KSoft® **(**Urgo)**	10cm x 3.5 m		
	Multi- layer 2: Light support bandage (Type 2)			
P	KLite® **(**Urgo)**	10cm x 3.5 m		
	Multi- layer 3: Light compression bandage (Type 3a) **14 – 17 mmhg at ankle when applied figure of eight**			
P	Profore#3® (Smith and Nephew)	one size		
	Multi-layer 3: Light compression bandage (Type 3b) 23mmHg at the ankle			
P	Coban® (3M) cohesive bandage**	10 cm x 4m		
	Sub-Category 3: Four-layer Elastic Kits **Only to be used if there is a sound rationale over two layer options** **Each system provides 40 mmhg at the ankle**			
T	Profore® (Smith and Nephew) multi- elastic kit	< 18 cm ankle	25 - 30 cm ankle	25 – 30 cm ankle
T	Ultra Four® (Robinson's) multi-elastic kit**	18 – 25 cm ankle	25 - 30 cm ankle	
	Sub-Category 4: High Compression (Type 3c) **Single bandage achieves same compression as four layer kit (40mmHg)**			
T	Tensopress® (BSN Medical)	10cm x 3m		
	Bandage Category 3 :Two-layer reduced Elastic/Inelastic Bandage Kits* **Each system provides 20mmHg at the ankle**			
P	KTwo Reduced® (Urgo)	10cm x 7.5m ankle circ.18 – 25 cm	10cm x 7.5cm Ankle circ. 25-32cm	
T	Coban2 Lite® (3M)**	one size		
	Medicated Bandages			
	Paste Bandages			
T	Ichthopaste® (Smith and Nephew) Zinc oxide paste and ichthammol bandage	7.5 cm x 6m		
T	Viscopaste (Smith and Nephew)cotton fabric medicated bandage with zinc oxide	7.5 cm x 6m		
T	Zip Zoc® (Smith and Nephew) 7.5 cm x 6m	80 cm x 7 cm (one size)		

*Patients should be placed in highest therapeutic level of compression that can be safely and comfortably tolerated ** Latex Free

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NHS Greater Glasgow and Clyde Compression Bandage Formulary
Primary Care and Acute Joint Formulary

Contents:

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Introduction:

This formulary has been developed by the ADTC: therapeutic sub committee Short Life Working Group to provide a range of compression bandages which will meet the needs of the majority of patients with Chronic Venous Insufficiency (CVI).

- Chronic venous insufficiency (CVI) is a progressive circulatory disease causing stasis, venous hypertension, oedema and ulceration in the lower limbs. Graduated compression therapy is the recommended therapeutic intervention in the treatment and prevention of CVI."
- >80% of leg ulcers are caused by venous insufficiency (Shai & Halevy, 2005)
- To achieve the most effective outcome; it is recommended that following holistic assessment patients are placed into highest level of therapeutic compression that can be safely and comfortably tolerated

Recommended categorisation of compression bandage systems	
Category	Pressure
Mild	<20mmHg
Moderate	≥20-40mmHg
Strong	≥40-60mmHg
Very strong	≥60mmHg

1.1. Accountability and Responsibility/Scope of Practice

Compression bandages should only be applied by those clinicians competent to do so. For this reason clinicians must ensure that they are up to date with evidence based best practice and this is demonstrated in KSF profiles. Staff developing this skill should have this identified within their individual PDP as agreed by their line manager.

Detailed discussion on the aetiology and pathophysiology of CVI is out with the scope of this guideline. However, clinicians are directed to best practice literature to guide them on the needs of the patient and the organisation, prior to choosing, prescribing and applying compression bandages

Personal professional development education can be accessed by a variety of routes including: University leg ulcer module; in- house study days facilitated by Vascular and Dermatology Nurse Specialists; and current literature available from a variety of on line sources (Table 1)

Table 1: Recommended reading to complement this formulary and support patient centred care: (this if for guidance only and not an exhaustive list)

1	SIGN 120 (2010) Management of chronic venous leg ulcers. *http://www.sign.ac.uk/pdf/sign120.pdf*
2	BNF 67 Section A5.8 Bandages provides products on drug tariff with unit costs. *http://www.bnf.org/bnf/search.htm?source=bnf&q=compression&n=10&s=31*
3	EWMA Position document understanding compression therapy (2003) MEP Ltd London *http://www.ewma.org/fileadmin/user_upload/EWMA/pdf/Position_Documents/2003/Spring_2003_English_.pdf*
4	Wounds UK (2013) Optimising venous leg ulcer services in a changing NHS: A UK consensus. London: Wounds *UK*. Available at: *http://www.wounds-uk.com*
5	Thomas S. The use of the Laplace equation in the calculation of sub-bandage pressure. *World Wide Wounds* 2003; available from URL: *http://www.worldwidewounds.com/2003/june/Thomas/Laplace-Bandages.html*
6	MacDougall M et al (2014) Standardisation through clinical audit: an example of good practice in leg ulcer management. http://www.wounds-uk.com/journal-articles/standardisation-through-clinical-audit-an-example-of-good-practice-in-leg-ulcer-management

2. Patient-centred Involvement in Management Plan

Following comprehensive, holistic assessment clinicians involved in the management of CVI and leg ulcers should consider the following important factors in the determination of effective treatment pathways (Table 2)

Table 2: Checklist of activity required when prescribing, applying and managing patient with compression bandages (adapted from SIGN 120)

Assessment	Inform the Patient that:
	A full leg ulcer assessment will be carried out including investigation of ABPI to confirm whether compression treatment is appropriate. Sign 120 recommends ABPI assessment if an ulcer fails to heal 4 weeks after presentation with conventional treatment.
	Routine swabbing of leg ulcers is not recommended
	They will be asked if there is any known allergies prior to product choice and application (Appendix 3)
Treatment	To optimise concordance inform the patient that:
	Compression treatment with bandages or hosiery is the single most important treatment for a leg ulcer.
	Bandaging only requires weekly changes unless conditions dictate otherwise
	Tap water is preferred for washing legs.
	Oral antibiotics or topical antimicrobials are only needed very occasionally e.g. spreading cellulitis, infection
Further investigation	Discuss the following with the patient:
	Pain scores and analgesia as indicated
	If condition fails to progress, specialist referral (i.e. vascular or dermatology) may be indicated
	Ongoing and regular holistic reassessment is required. Sign 120 recommends repeating ABPI if ulcer fails to progress after 12 weeks of compression therapy
Direct patient involvement	Discuss with the patient the importance of :
Exercise	Regular ankle/calf exercises
	Elevation of legs at rest
	Exploring sleeping pattern and encourage bed rest at night
Skin care	Maintaining skin hydration using simple emollients i.e. Xerobase,50:50
All holistic assessment and ongoing management of leg ulceration and CVI should be recorded in an NHSGGC Leg Ulcer Care Pathway	

3. General Bandaging Considerations

Once assessment is carried out to determine if compression bandaging is indicated; consideration of general factors relating to bandaging should be taken to help inform best practice for choice and application. (Table 3)

Table 3: General Bandaging Considerations

General Information for Management of CVI and Leg Ulcers

- Any bandaging of the lower limbs should start at the base of the toes and extend to 2cm below the popliteal space with either a spiral or a figure of eight application as per individual manufacturer's instructions. This is to aid in the effective redistribution and reduction of oedema and minimise the risk of potential bandage trauma (i.e.-a "tourniquet" effect.)

- Mixed aetiology ulcers (e.g.-diabetes, PVD, RA) may require specialist investigation and referral to explore most appropriate bandage choice. (Section 8)

- Light support bandages (KSoft® and KLite®/Comfifast®) can be used to contain primary dressings, absorb exudate and support leg where compression is contraindicated.

Categories of Bandages

Category 1: Short Stretch Inelastic systems: can be used for the management of leg ulcers and chronic oedema.
Available as single components or as kits.

Category 2: Multi-layer Elastic/Inelastic Bandage Kits:

- **2.1: Two-layer Kits**: achieve the same levels of compression as four-layer; may lead to greater concordance for patients and should therefore be the preferred choice.

- **2.2: Single components of Multi-layer Elastic Systems**: can be made up from individual bandages to provide either full or reduced compression and are a more cost-effective multi-layer option than using four-layer kits.

- **2.3: Four-layer Elastic Kits:** have been historically used to provide full compression and may be more convenient for certain situations.

- **2.4**: **Single layer High Compression**: used with specialist advice only if multi-layer combinations will not provide optimum treatment outcomes. For use with KSoft® as sub-wadding layer

Category 3: **Two-layer Reduced Elastic/Inelastic Bandage Kits:** used for patients with mixed aetiology

4. Multi-Layer Elastic Components

If multi-layer bandage systems are considered most effective, these can be modified to meet individual patient needs. Flexible options may be also be more cost effective and reduce waste if not all components of a kit are required or additional components are required . (Table 4)

- Use multi-layers only if there is a sound rationale over two-layer options

Table 4: Flexible options when multi-layered options are required

Possible combinations of individual components	**3-layer-option 1 reduced compression <18-25cm**	**3-layer-option 2 reduced compression 18-25cm***	**3-layer-option 3 Reduced compression 18-25cm**	**4-layer full compression 18-25cm**	**3-layer full compression >25cm***
ABPI	ABPI between 0.6-0.8mmHg	ABPI between 0.6-0.8mmHg	ABPI between 0.6-0.8mmHg	ABPI between 0.8-1.5mmHg	ABPI 0.8mmHg-1.5mmHg
Multi-layer 1	KSoft® x 2 layers	KSoft® x 1 layer			
Multi-layer 2	KLite®				
Multi-layer 3	Coban® (light compression 23mmHg)	Profore#3®-class 3a (light compression 10-12mmHg when applied spiral or 14-17mmHg when applied figure of eight)	Coban® (light compression 23mmHg)	Profore#3®-class 3a (light compression 14-17mmHg when applied figure of eight)	Tensopress®
Multi-layer 4	Not required			Coban® (light compression 23mmHg	Coban® (light compression 23mmHg)
Total compression	23mmHg	10-12 or 14-17mmHg	23mmHg	35-40mmHg	35-40mmHg

5. Product Descriptors

The following are summary notes on products on formulary. It is the responsibility of the prescribing clinician to ensure that choice meets individual patient needs and those they are competent in application as per manufacturers' instructions and ongoing assessment.

5.1. Bandage Category 1: Short Stretch Inelastic Bandages

Each system provides 40mmHg of compression at the ankle.	
Preferred choice	**Second choice** (Latex Free option if required)
Actico® (Activa) Cohesive Bandage	**Actico 2C® (Activa) Cohesive Bandage Kit**
Single units: 6m length x 10cm or 12cm.width	2 component kit
Ankle circumference: 18-25cm apply1x Actico 25-30cm apply 2 X Actico	Ankle circumference 18-25cm and 25-30cm kits available

5.2. Bandage Category 2: Multi-Layer Elastic/Inelastic Bandage Kits

5.2.1 Sub Category 1: Two- Layer Elastic/Inelastic Kits

Each system provides 40mmHg of compression at the ankle.	
Preferred choice	**Second choice** (Latex Free option if required)
KTwo® (Urgo)	**Coban 2® (3M)**
7.5m length; width 10cm ankle circumference: • 18-25cm • 25-32cm	One size only

5.2.2 Sub Category 2: Single Components to create Multi-Layer Elastic Bandage combinations

5.2.2a

Multi-layer 1: Sub-Compression Wadding
KSoft® (Urgo) (Latex Free)
10cm x 3.5m

5.2.2b

Multi-layer 2:Light Support Bandage (Type 2)
KLite® (Urgo) (Latex Free)
10cm x 3.5m

5.2.2c

Multi-layer 3: Light Compression Bandage (Type 3a) Each single bandage provides 14-17mmHg at the ankle when applied figure of eight or 10-12mmHg when applied spiral(Table 3)
Profore#3® (Smith and Nephew)
One size

5.2.2d

Multi-layer 4: Light Compression Cohesive Bandage (Type 3b) Each single bandage provides 23mmHg at the ankle
Coban® (3M) (Latex Free)
Size 10cm x 4m

5.2.3. Sub Category 3: Four-Layer Elastic Kits:

Each system provides 40mmHg of compression at the ankle if all components are used:	
Preferred choice	**Second Choice** (Latex Free option if required)
Profore® (Smith and Nephew) Multi-Layer Elastic Kit	**Ultra Four® (Robinsons) Multi-Layer Elastic Kit**
Components: Profore#1, Profore#2 (class 2); Profore#3 (class 3a) and Profore#4 (class 3b)	Components Ultra Soft, Ultra Lite (class 2), Ultra Plus (class 3a) and Ultra Fast (class 3b)
ankle circumference kit <18cm, 18-25cm 25-30cm	ankle circumference kit 18-25cm 25-30cm

5.2.4 Sub-category 4

High Compression (Type 3c) (Single bandage achieves same compression as four-layer kit)

Multi-layer 2 or 3: High Compression Bandage (Type 3c) Each single bandage provides 35-40mmHg of compression at the ankle
Tensopress® (BSN Medical)
Size: 10cm x 3m
1.Larger limb: Ankle circumference >25cm as part of a 3-layer kit with KSoft®, Tensopress® and Coban® (Table 3) *OR* *2.With specialist advice only if category 3a and/or 3b will not provide optimum treatment outcomes*. For single use with KSoft® as sub-wadding layer

5.3. Bandage Category 3: Multi-Layer Elastic/Inelastic Bandage Kits for Reduced Compression

Each system provides 20mmHg of compression at the ankle.	
Preferred choice	**Second choice** (Latex Free option if required)
KTwo Reduced® (Urgo)	**Coban 2 Lite® (3M)**
Length 7.5m length, Width : 10cm ankle circumference Sizes: 18-25cm and 25-32cm	One size only

6. Paste Bandages

- Zinc paste bandages have been used with compression bandages for the treatment of CVI for patients with lichenification and ezcema
- They provide a physical barrier to stop damage from scratching and help to break the “itch-scratch” cycle in these conditions.
- Paste bandages are associated with hypersensitivity reactions and should be used with caution
- Topical steroids action is intensified if used with paste bandages and doses should be altered accordingly
- Nb: due to non-conformability, technique in application of paste bandages differs from compression bandages. To ensure patient safety refer to manufacturers instructions prior to use

Paste Bandages and Stockings		
Option 1 Medicated bandage	**Option 2** Medicated bandage	**Option 3** Medicated stocking
Icthopaste® (Smith and Nephew) Zinc oxide paste and Ichthammol bandage BP bandage	**Viscopaste ® (Smith and Nephew)** Zinc oxide paste bandage	**Zip Zoc® (Smith and Nephew)** Zinc oxide impregnated stocking
One size: 7.5cm x 6m	One size: 7.5cm x 6m	One size: 80 x 7 cm

7 Allergens and Use of Compression Bandages.

- "The incidence of contact allergy increases with the duration of ulceration". Principal sensitisers include ingredients of topical applications, dressings and bandages. Examples of common sensitisers include: lanolin, antibiotics, antiseptics, preservatives, emulsifiers, resins and latex". However, the majority of latex allergy incidence is associated with inhalation rather than contact and new incidence has decreased significantly with stoppage of use of powdered latex gloves.

- The guideline has taken into account such factors and where possible, minimised the risk to patients and staff in product selection and clear identification of those containing latex.

- Although compression bandages containing latex are not in direct contact with skin, latex free alternatives are provided for patients and staff who are at risk of known or suspected latex allergy.

- At the time of publication, there is no robust evidence available to suggest that latex free bandages are less effective than those containing latex. However, anecdotally it is perceived that on correct application, compression may not be sustained in latex free bandages resulting in sub optimal therapeutic levels. Further research is recommended in this area.

- Until evidence is available, it was considered that in line with NHSGGC's Safe Use of Latex Policy, the inclusion of latex containing bandages for those who do not have a known latex allergy and identification of necessary precautions and provision of latex free alternatives for those who are at risk was the most patient centred care pathway.

For further information refer to NHSGGC "Safe Use of Latex" Policy:
http://www.staffnet.ggc.scot.nhs.uk/Info%20Centre/Health%20and%20Safety/Corporate%20Health%20and%20Safety/Documents/Policies/Latex%20Policy.pdf

PATIENT: If an allergy is suspected/known:

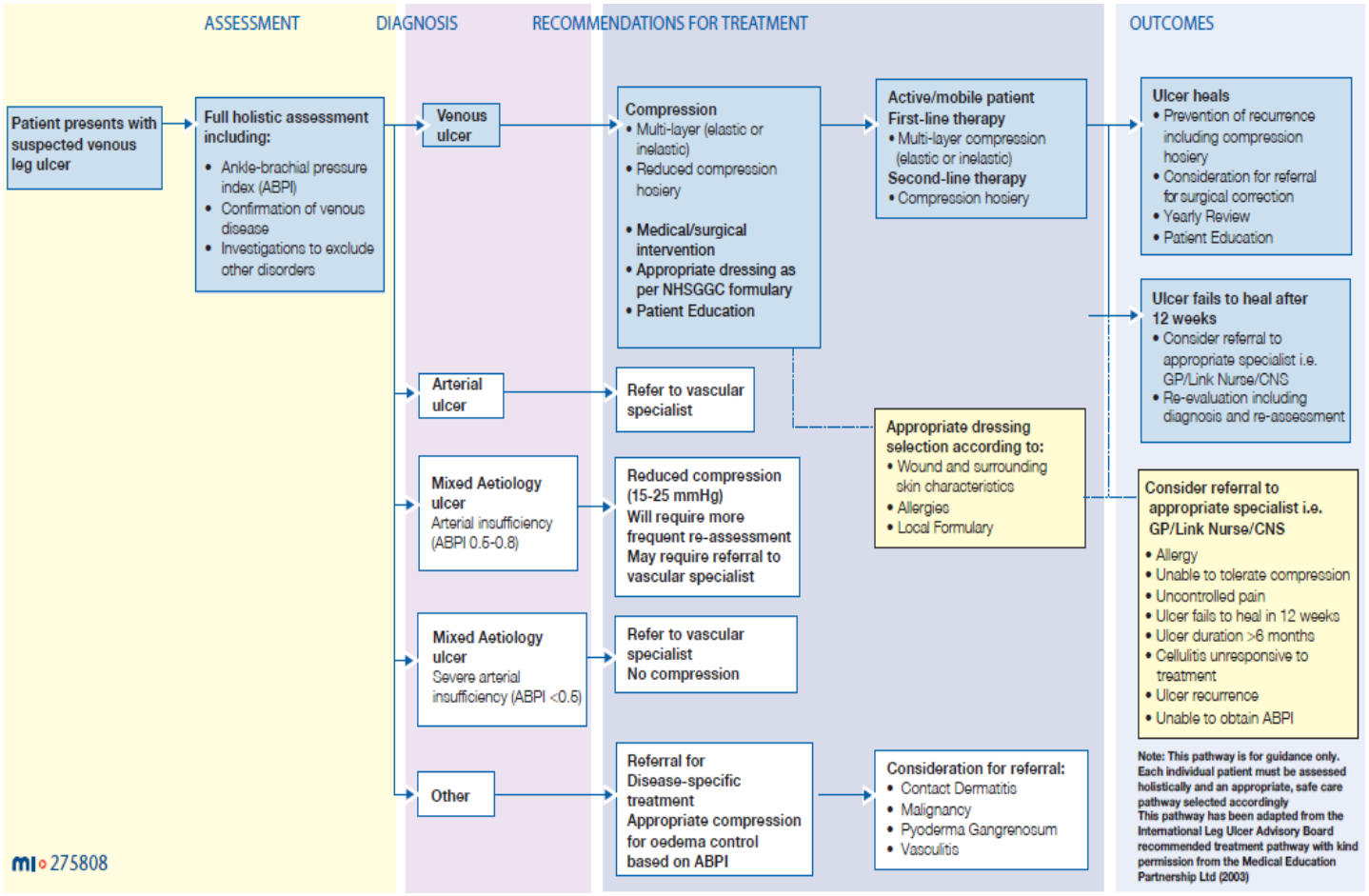
- confirm diagnosis (patch test or referral to dermatology)
- treat contact dermatitis appropriately
- do not use bandages with latex (or known sensitiser)
- use bandages with high cotton content, or that have double covered yarns to limit skin contact with elastic components
- use of a cotton tubular under layer (which must be wrinkle free on application)

(Ref: edited from International consensus: Best Practice for the management of lymphoedema 2006. *http://www.woundinternational.com/pdf/contnet_175.pdf*)

STAFF: if known/suspected allergy

- Refer to NHSGGC Policy on Safe Use of Latex
- Staff who regularly continue to use latex bandages should be included in the annual health surveillance programme
- Adopt the necessary precautions when working with latex or patients with known latex allergies
- Those staff with a known latex allergy will discuss with patient if a non latex bandage would be equally effective in their management. If not alternative arrangements within the team must be considered to optimise quality of patient care
- This includes out of hours staff who may have a latex allergy to minimise risk

8. Leg Ulcer Advisory Board Algorithm WITH MINOR AMENDMENTS



9. Accessories

Seal-Tight® (Autono-Med Ltd) Water proof wound protector for lower limb when patient bathing and showering	
Sizes:	• Adult short length (Knee length • Adult wide short leg (Knee length)

P – Preferred List T – Total List

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10. REFERENCES AND USEFUL LINKS

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11. Acknowledgements

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