LIVE ON FACEBOOK

TRANSFORMING WOUND CARE. SIMPLIFYING VENOUS LEG ULCER MANAGEMENT

17 DEC 7:30PM

JEN LETCHFORD

DR CAROLINE DOWSETT

Journal of Community Nursing JCN

Supported by Coloplast

Transforming wound care. Simplifying venous leg ulcer management

Dr Caroline Dowsett
Nurse consultant tissue viability

Jen Letchford
Tissue viability nurse advisor, Coloplast

Learning objectives

- Why we need to transform wound care
- Understanding the current national lower limb management guidelines
- Supporting patient self-management
- Opportunities for shared care and sharing best practice
- Partnership working

Current challenges in wound care

- Demographics
- Wound prevalence
- Funding and staffing
- Covid-19

Community nurses: 14% since 2009[1]

District nurses: 45% since 2009[1]

JCN

Coloplast

The impact of chronic wounds

Projected annual NHS cost of wound management at

11% growth[2]

Are your resources increasing at 11% annually?

Recent drivers for transformation

Estimated annual wound care costs **£5.3 billion**[3]

Guest *et al* 2015

Lord Carter Review Feb 2016

Unwarranted variation

NHS Rightcare Betty's story 2017

Difference between sub-optimal and optimal care

CQUIN Lower leg wounds

CQUIN 2020/2021

National Wound Care Strategy Programme (NWCSP)

Clinical workstreams

- Lower limb ulcers
- Pressure ulcers
- Surgical wounds

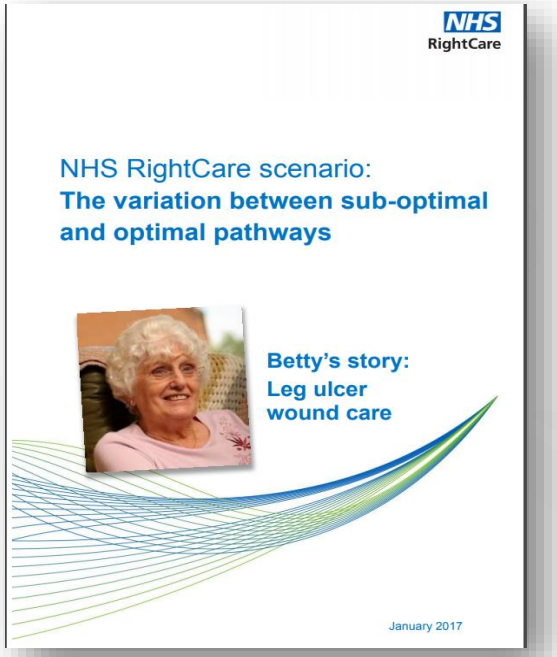
NWCSP

Enabler workstreams

- Supply & distribution
- Education and workforce
- Data & information

Simplification of wound care

Patient impact – Betty's story[4]



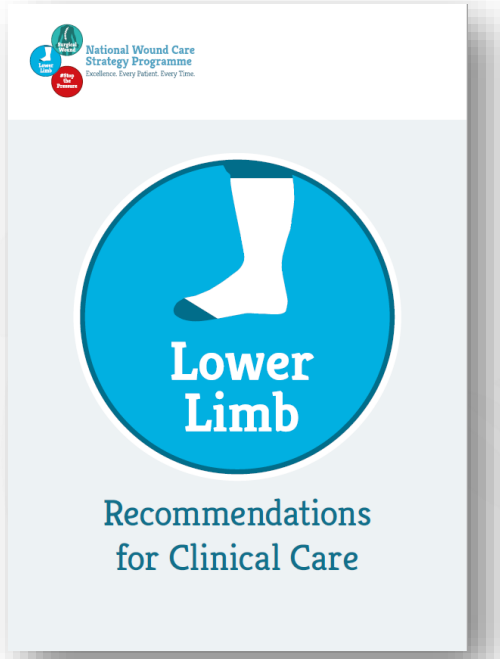
Sub-optimal pathway
2 years

Optimal pathway
5 weeks

Betty's story

- Highlights inequalities in care for patients with leg ulcers
- Delays in assessment
- Failure to implement evidence-based treatments
- Compression therapy for venous leg ulcers [5, 6]
- Poor patient outcomes

National Wound Care Strategy Programme[7]



- Opportunity to improve healing rates and reduce patient suffering
- Recommendations for Clinical Care based on evidence and existing guidelines
- Focus on immediate and necessary care, including red flags
- Diagnosis and treatment
- Ongoing care and review

JCN

Coloplast

Lower limb recommendations

Lower Limb – recommendations for clinical care

For further information, please refer to the full NWCSP Lower Limb Recommendations at NationalWoundCareStrategy.net

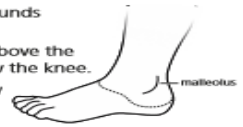
National Wound Care Strategy Programme
Excellence. Every Patient. Every Time.

Immediate and Necessary Care

For people with one or more wounds below the knee.

Leg wound- originating on or above the malleolus (ankle bone) but below the knee.

Foot wound – originating below the malleolus.



RED FLAGS

- Acute infection of leg or foot (e.g. increasing unilateral redness, swelling, pain, pus, heat).
- Symptoms of sepsis.
- Acute or chronic limb threatening ischaemia.
- Suspected deep vein thrombosis (DVT).
- Suspected skin cancer.

- Treat infection.
- Immediately escalate.
- For people in the last few weeks of life, seek input from their other clinicians.

Immediate care

- Cleaning and emollient.
- Simple low-adherent dressing.
- Leg wounds, first line mild graduated compression.
- Supported self-care (when appropriate).

Assessment times for diagnosis and treatment

- In hospital with diabetic foot wound - refer to MDT **within 24 hours.**
- Any other type of foot wound - refer to MDT **within 1 working day.**
- Leg wounds - **assess within 14 days.**

Wounds on the Foot

One or more wounds below the malleolus

Diagnosis and treatment

1 Assess and identify contributing causes for non-healing

2. Diagnose cause of non-healing and formulate treatment plan

People with confirmed or suspected diabetic foot ulceration

- Refer to diabetic foot team.
- Provide care in line the NICE Guideline for Diabetic Foot Problems.

People with confirmed or suspected peripheral arterial disease

- Refer for vascular surgical opinion.
- Provide care in line the NICE Guideline for Peripheral Arterial Disease.

Ongoing care and review

Review at each dressing change and at weekly intervals

- Monitor healing at **4-week intervals** (or more frequently if concerned).
- If unhealed at **12 weeks**, reassess.

Wounds on the Leg

One or more wounds above the malleolus

Diagnosis and treatment

1 Assess and identify contributing causes for non-healing

2. Diagnose cause of non-healing and formulate treatment plan

Leg wounds with an adequate arterial supply and no aetiology other than venous insufficiency

- Refer for venous surgical/endovenous interventions.
- Strong compression therapy.

Leg wounds with signs of arterial disease

- Refer for vascular surgical/endovenous interventions and advice on compression.
- Pending vascular opinion, if no symptoms of arterial insufficiency, continue with mild graduated compression.

Leg wounds of other or uncertain aetiology

- Refer for dermatology opinion (or other specialist depending on symptoms and service arrangements).
  - Pending specialist opinion if no symptoms of arterial insufficiency, continue with mild graduated compression.

Lymphoedema

- Refer for expert diagnosis and advice about lymphoedema.

Ongoing care and review

Review at each dressing change and weekly intervals

Monitor healing at 4-week intervals (or more frequently if concerned)

- If deteriorating or no significant progress towards healing, escalate.

If unhealed at 12 weeks, reassess

- If progressing to healing but still unhealed, undertake comprehensive re-assessment.
- If deteriorating or no significant progress towards healing, escalate.

Following healing

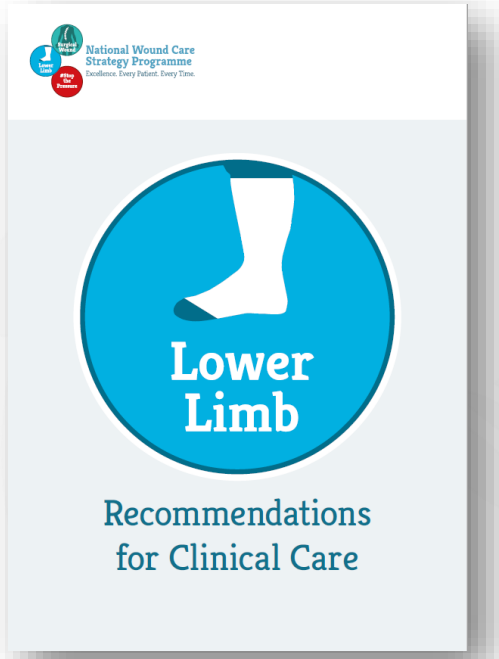
Venous Leg Ulceration

- Compression hosiery.
- 6-monthly review for replacement of compression garments and ongoing advice.
- If changes in lower limb symptoms or skin problems relating to hosiery, undertake comprehensive re-assessment.

JCN

Coloplast

Wounds on the leg



- Comprehensive patient assessment within 14 days
- Wound assessment
- Lower limb assessment
- Diagnose cause and formulate treatment plan
- Application of compression for venous leg ulcers
- Where possible, people with leg wounds should be encouraged to self-care with support

JCN

Coloplast

Supported self-care

'Transforming venous Leg ulcer management: Opportunities for self-care and shared care'

Dowsett (2020)

Submitted for publication

- National surveys tell us more than 40% of people want to be more involved in decisions about their care
- 40% of people living with a long-term condition want more support to manage their health[8]

Which patients with leg ulcers are suitable for self-care?

- Important to consider the complexity of the patient and the complexity of their ulcer
- Is the patient willing and able to self-care with support?
- Is there significant oedema in the leg?
- Ulcer size and wound bed status?

Simple and complex venous leg ulcers[9]

‘Simple’ VLU

- ABPI 0.8–1.3
- Area <100cm²
- Present for <6 months

Manage in primary care/community-based setting

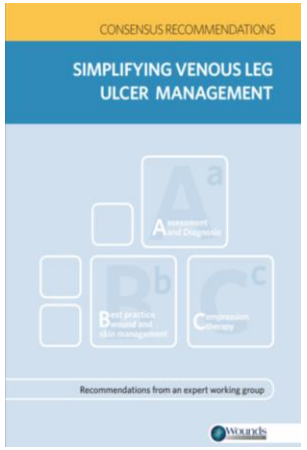
If clinicians competent in compression therapy are not available, refer to a specialist service that manages VLUs

‘Complex’ VLU

- ABPI 0.8–1.3
- Area ≥100cm²
- Present for ≥ 6 months
- Controlled cardiac failure
- Current infection and/or history of recurrent infections
- History of non-concordance
- Wound has failed to reduce in size by 20–30% at 4–6 weeks despite best practice

Refer to specialist service that manages VLUs

Depending on local service provision, this may be specialist wound management clinic/service, a community-based service (e.g. leg club) or a dermatology, phlebology or vascular service. Further investigations may include duplex scans



Supported self-care in practice

- Miss J — 20 years old presented with an ulcer on the lower leg
- Family history of leg ulcers and had her first ulcer aged 16
- Full leg ulcer assessment and ABPI — 1.1 both legs
- Diagnosis of venous leg ulcer
- Simple venous leg ulcer pathway: silicone foam
- Referral to vascular services

JCN

Coloplast

Supported self-care in practice

- Simple venous leg ulcer pathway
- Biatain® silicone foam dressing
- Compression hosiery
- Education to enable supported self-care
- Follow-up and review virtually
- Healed in six weeks
- Prevention pathway

JCN

Coloplast

Supported self-care in practice

- Mr P — 63-year-old man
- Referred to the lower limb service
- History of diabetes and arthritis
- Recurrent ulcer on right leg
- Full leg ulcer assessment — ABPI 0.98 on the right and 1.0 on the left leg
- Diabetes well controlled

Supported self-care in practice

- Simple venous leg ulcer pathway
- Biatain silicone foam dressing
- Compression hosiery kit
- Education and supported to enable supported self-care
- Follow-up and review virtually
- Healed in four weeks
- Prevention pathway

JCN

Coloplast

Norma's Story

Norma, wound patient, UK

When a dressing doesn't fit perfectly, a Gap can form underneath it[10,11]

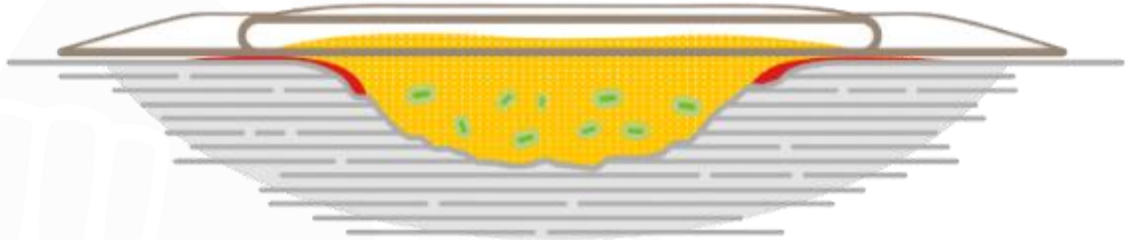


Image copyright of Coloplast

Meeting report

Managing the gap to promote healing in chronic wounds — an international consensus

Meeting report

Closing the gap between the evidence and clinical practice — a consensus report on exudate management

Biatain Silicone in clinical practice

Image copyright of Coloplast

Absorbency under compression data[1,2]

Optimal Exudate Management – Retention, fluid handling and conformability to the wound bed

Sponsored by Coloplast

Presented at Wounds UK 2020

Authors: Lorentsen B. & Andersen M.B., Coloplast A/S, Humlebaek, Denmark

The ideal solution to reduce exudate pooling

Optimally, a wound dressing should manage exudate in a way that keeps the wound moist, controls exudate, retains the liquid to keep the periwound skin dry, and eliminates dead space by filling all cavities with dressing material i.e. conforming to the wound bed.[1] These abilities can be quantified/measured in-vitro by its capacity to absorb and permeate, absorb and retain, and produce a swelling rise Alpha of ≥ 0.2. Likewise, Biatain® Silicone and Biatain Silicone Ag's capability to produce a swelling rise of Alpha of ≥ 0.2 has recently been quantified and validated.[2]

Recently, total fluid handling capacity (measured as the sum of absorbency and moisture vapour loss) of silicone foam dressings were measured and compared with Biatain® Silicone showing the highest fluid handling capacity.[3] Fluid retention is just as important to keep exudate retained in the dressing rather than pooling in the wound or creating leakage and maceration of the wound edges and periwound skin. The capacity to retain fluid differs between the available silicone foam on the market.

Here tests of absorbency and retention performed at an independent laboratory are presented against dressings from other brands.

Test of fluid absorbency and retention

The Free Swell Absorption Capacity and Fluid Retention was determined by an external laboratory using the SMTL test method TM-404.[4] In this test, the dressing was weighed using a calibrated balance then immersed in a tank containing a test solution (sodium/calcium chloride test solution 142 mmol/litre sodium ions and 2.5 mmol/litre calcium ions) warmed to the required temperature. The tank (with dressing) was then incubated for 30 minutes. Following incubation, the dressing was transferred into an empty receiving tray and allowed to drain for 30 seconds, then weighed to calculate the absorption capacity of the dressing. Using the dimensions of the raised padded active area, a rigid template and mass with a pressure equivalent to 40 mmHg was then applied to the dressing for 30 seconds. The mean active area of the five dressing samples was used to calculate the mass required. The dressing was then re-weighed to calculate the fluid retention capacity of the dressing.

The testing was performed on five replicates.
Eight different bordered silicone foam dressings were tested Tielle™ Plus, Allevyn Gentle Border, Allevyn Life, Mepilex® Border, Mepilex® Border Flex (Mepilex® Border Comfort), Urgo Foam Border, AQUACEL™ Adhesive Border and Biatain® Silicone.

Products

The included products were bordered silicone foam dressings indicated for moderate to highly exuding wounds.

Product	Dressing size (cm)	Active area (cm²)
Biatain® Silicone	10x10	42.25
Allevyn Life	12.9x12.9	56.39
Allevyn Gentle Border	10x10	58.06
Tielle™ Plus*	11x11	48.42
Urgo Foam Border	10x10	34.80
Mepilex® Border Flex	10x10	41.99
Mepilex® Border	10x10.5	42.38
AQUACEL™ Adhesive Foam	10x10	48.56

Results

Biatain Silicone had both a significantly better absorbency and retention (t-test, p<0.01) compared to the seven other bordered silicone foam dressings. Between the highest and lowest performing dressing, both free swell absorption capacity and fluid retention was more than four times greater.

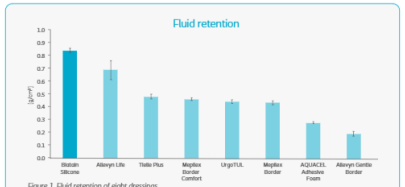


Figure 1. Fluid retention of eight dressings.

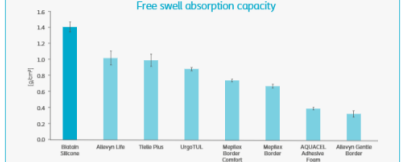


Figure 2. Free swell absorption of eight dressings.

Clinical implication

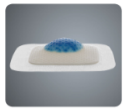
Biatain Silicone shows to deliver the ability to conform to the wound bed , absorb vertically and retain exudate at highest performance.

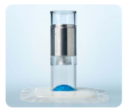
Fluid handling capacity and retention of fluid may have implication for the healing and healing time of the wound. Wound fluid escaping the wound reaching the periwound skin may cause maceration which causes enlargement of the wound area. This is directly leading to a delay in wound healing.[5]
Another problem with exudate pooling between the wound bed and dressing is the risk of infection.

In 2019, Hoffman & Rørn presented how Biatain Silicone products swell and conform after absorbing fluid. The wound bed conformability is defined by a relative value of swelling height over diameter of wound cavity.[3]

For Biatain Silicone and Biatain Silicone Ag products swelling heights are measured up to 2 cm. Another publication at Wounds UK 2020 presents how the wound bed conformability is defined and quantified. Here it is validated how the products are capable of absorbing fluids producing a relative swelling height (swelling height by wound diameter) of more than 0.2.[2]

Despite the great variability in performance on both fluid handling capacity, fluid retention and free swell absorption, all the included dressings are indicated for moderately to highly exuding wounds and all (except Mepilex Border) have a wear time of up to 7 days depending on the level of exudate.





Conclusion

The capacity to absorb and retain differs significantly between products. Between the highest and lowest performing dressing, both free swell absorption capacity and fluid retention was more than four times greater. Retention of exudate within the dressing has implication for the maceration of the periwound skin and thereby healing time.[5] These results show Biatain Silicone's high performance on retention. Similarly, extensive in vitro data supports Biatain Silicone as an ideal solution to reduce exudate pooling having high absorption and the ability to conform to the wound bed.

References:
1. Sibbald et al., Preparing the Wound Bed - Debridement, Bacterial Balance and Moisture Balance. Ostomy/Wound Management. 2000;46(11):14-35. 2. Lorentsen B. & Andersen M.B. Defining Wound Bed Conformability (2020). Poster presentation at Wounds UK 2020. 3. Nielsen 2019. Fluid Handling Capacity of Ten Silicone Dressings – the Importance of Effective Exudate Management. Poster presented at Wounds UK.
4. SMTL test report no: 20J606J/2. 5. Hoffmann & Rørn, Fill the Gap and Reduce Exudate Pooling with a Silicone Dressing with 3D Fit Technology. Poster presented at Wounds UK. 2019. 6. Haryanto et al. Relationship between maceration and wound healing on diabetic foot ulcers in Indonesia: a prospective study. Int Wound J. 2017;14(3):516-522.

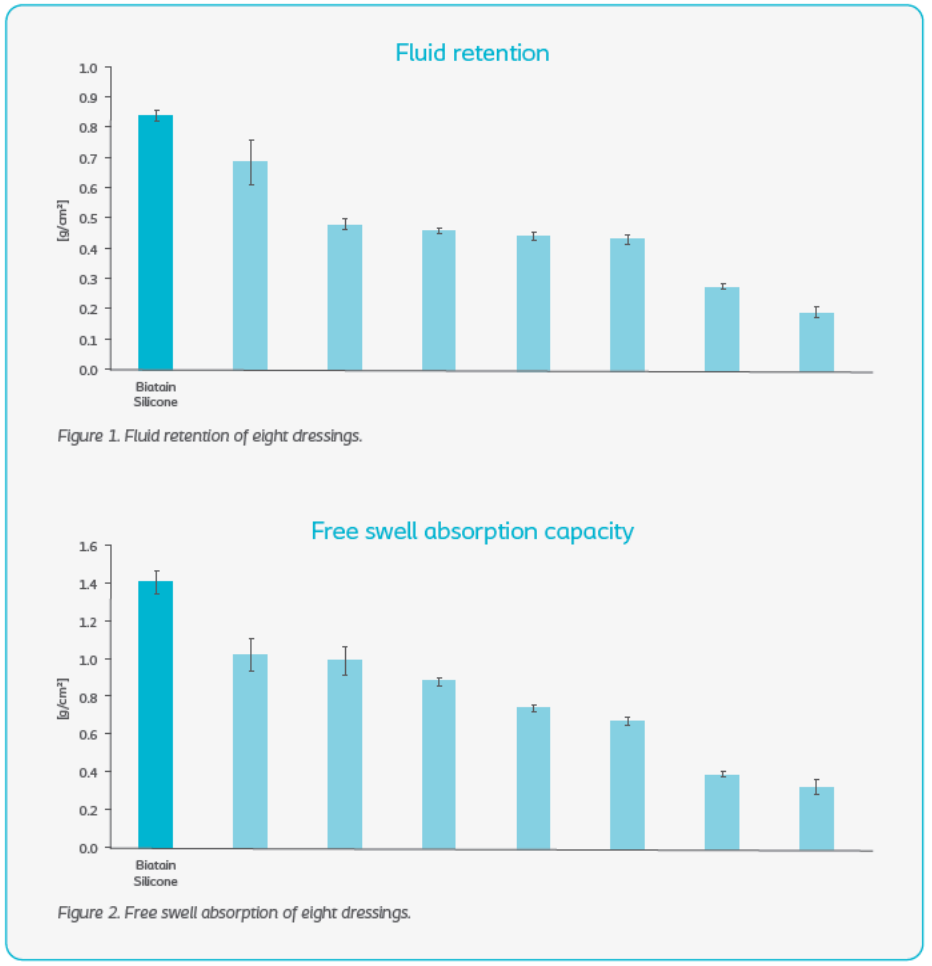


Figure 1. Fluid retention of eight dressings.

Figure 2. Free swell absorption of eight dressings.

Norma — living with a leg ulcer

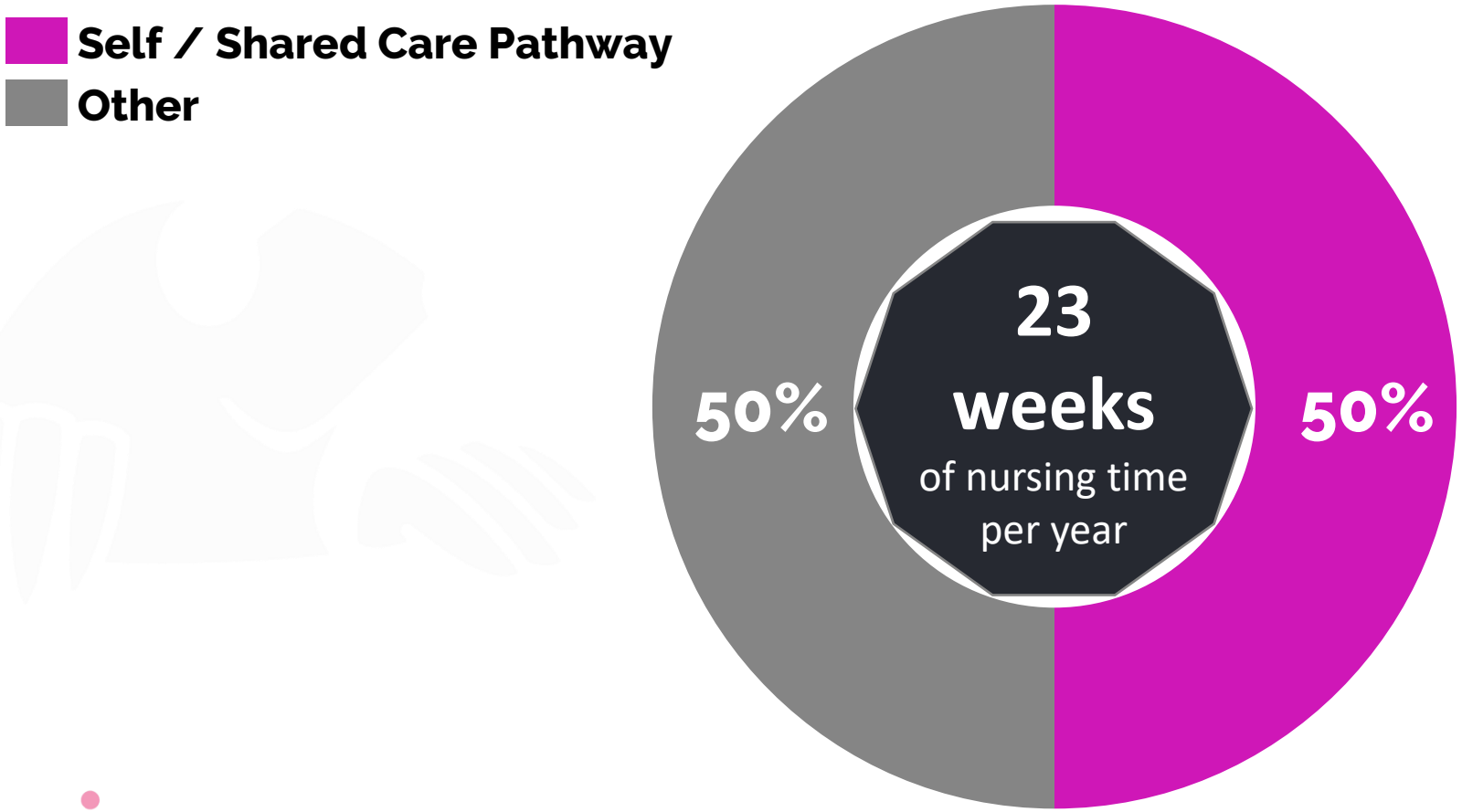
Norma, venous leg ulcer patient

‘It’s an excellent dressing, it’s so easy you can do it yourself. It gives you the independence to look after yourself.’

Simplicity

Opportunities for self-care and shared care solutions

Published data from MPFT[13]

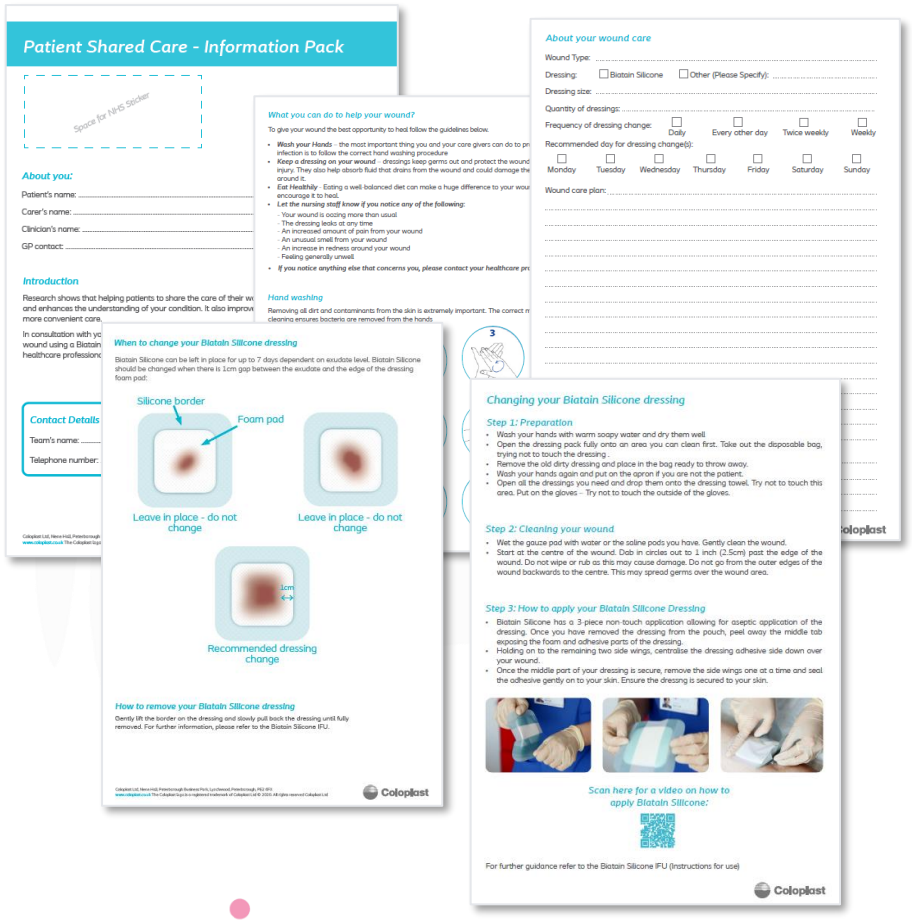


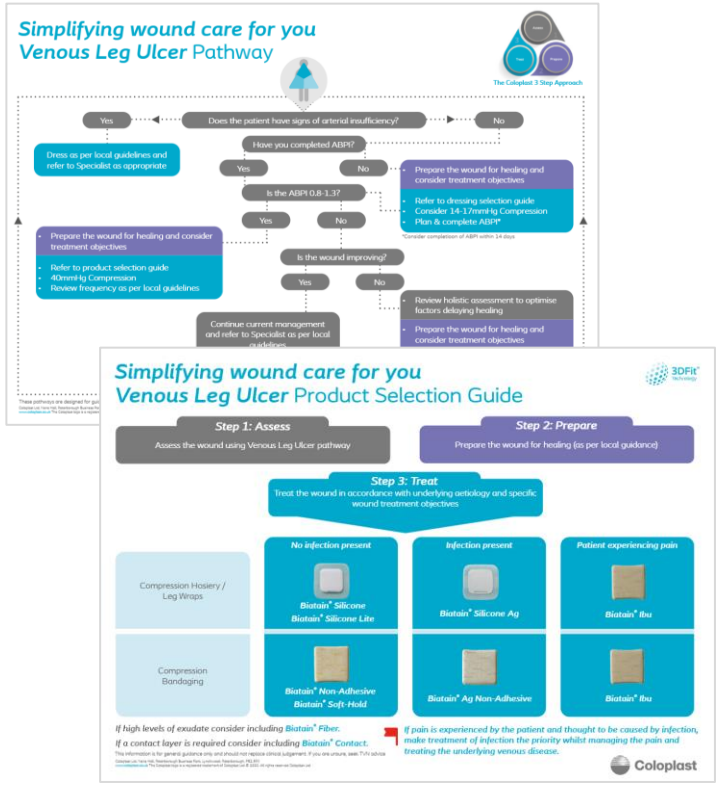
NHS
Midlands Partnership
NHS Foundation Trust
A Keele University Teaching Trust

JCN

Coloplast

Patient information pack and support materials





JCN

Coloplast

In summary

Transformation

=

Simplicity

Further information

For further information and access to resources discussed in tonight's session, please visit:

www.coloplast.co.uk/wound

JCN

Coloplast

References

1. Wounds UK, Vol 15, No.4, 2019.
2. Guest et al., Health Economic Burden, Journal of Wound Care, 2017, Vol26, No6
3. Guest JF, Ayoub N, McIlwraith T, et al (2015) Health economic burden that wounds impose on the National Health Service in the UK. BMJ Open 5: e009283. Available online: http://bmjopen.bmj.com/content/5/12/e009283
4. NHS Rightcare (2017). NHS Rightcare Scenario: The variation between sub-optimal and optimal pathways. Betty's story Leg ulcer wound care. Available online: www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2017/01/nhs-rightcare-bettys-story-narrative-full.pdf
5. Management if chronic venous leg ulcers. A national clinical quideline. Healthcare Improvement Scotland. August 2010
6. O'Meara S, Cullum N, Nelson EA, Dumville JC. Compression for venous leg ulcers. Cochrane Database of Systematic Reviews 2012, Issue 11. Art. No.: CD000265. DOI: 10.1002/14651858.CD000265.pub3.
7. National Wound Care Strategy Programme. Lower Limb. Recommendations for Clinical Care. 2020
8. Dowsett, C. Data on File. GP survey results 2016
9. Harding K, et al. Simplifying venous leg ulcer management. Consensus recommendations. *Wounds International* 2015. www.woundsinternational.com
10. Wounds International 2020 | Vol 11 Issue 3 | ©Wounds International 2020 | www.woundsinternational.com
11. Wounds International 2020 | Vol 11 Issue 3 | ©Wounds International 2020 | www.woundsinternational.com
12. Lorentsen, B., Andersen, M.B., Optimal Exudate Management – Retention, fluid handling and conformability to the wound bed. Poster presented at EWMA 2020
13. McDonald, M., Bailey, R., Birth, E., Improving wound care services through a shared care pathway. JCN 2020, Vol 34, No.

JCN

Coloplast

TO ACCESS YOUR CERTIFICATE VISIT:

www.jcn-live.co.uk/certificate