

LIVE

THURSDAY 4TH JULY 7:30PM

PATIENT

INDEPENDENCE

DAY

Empowering patient independence: The impact of adjustable compression wrap systems for lymphoedema and venous leg ulcers

Presented by

Dr Melanie Thomas & Karen Morgan



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 **People.Health.Care.**

JCN:

LIVE Q&A

SEND IN YOUR QUESTIONS BY COMMENTING
ON THE VIDEO









WHAT ARE WE GOING TO CHAT ABOUT TONIGHT?

- Empowerment
- Independence
- Understanding what is important and of value
- Shared decision-making
- Cost-effectiveness
- Value-based healthcare.

Are wraps a solution?



LYMPHOEDEMA FACTS

-  All oedema lasting longer than **three months** is lymphoedema
-  Failure of the **lymphatic system** is lymphoedema
-  Can occur **anywhere in the body**
-  Can occur at **any age**
-  In Wales, **8 per 1,000** people have lymphoedema
-  Physical, psychological, emotional and functional problems.

CONSEQUENCES OF LYMPHOEDEMA

NHS	PATIENT
Cellulitis	Quality of life
Wounds	Psychological issues – body image / anxiety
Falls	Physical issues
Wasted resources / delays in diagnosis and treatment	Unable to work / dependency on others
Variation and harm	Poorly understood condition
Pressure on unscheduled care	Obesity
Cost and time impact	Social impact

HOW CAN WE HELP OUR PATIENTS HELP THEMSELVES?

Increase
knowledge

Problem solve

Empower


Create
independence

Shared
decisions

Proactive care



Complications

TASK	ADVICE	VALUE?	BURDEN
Compression garments Multilayer bandaging Wraps	Wear daily for 2 hours? 4 hours? 8-12 hours? All day?	Reduce swelling Reduce risk of cellulitis Heal wounds Stop leakage	Body image/cosmetic/stigma/ privacy/exposed/soreness/affects ADL/ burden/reminder of condition/dependence on others/ medical
Skin care	Wash, dry, moisturize skin daily What cream?	Reduce risk of cellulitis 	Reminder of condition/ time to do/smell and the feel of creams/ touching of skin/function ability to do/knowledge/dependence on others
Exercise	Daily specific exercises Move your body five times a week for 30 minutes	ROM, muscle strength, good public health message, maintains healthy weight, mental health benefits – heart, cancer, stroke, diabetes	Time commitment/ accessibility/fear/money/ knowledge/motivation
Weight management	Healthy eating for life Maintain or try to achieve a BMI of 25	Reduces lymphoedema, general health benefits and premature death	Commitment/accessibility/ fear/money/knowledge/ motivation/dependence on others
Simple lymph drainage (SLD)	Perform SLD daily	Awareness of body, keep tissues soft, promote lymphatic flow	Reminder of condition/ time to do/touching of skin/function/ ability to do/ knowledge
Advice – dos and don'ts	List of dos and don'ts	May help people feel in control?	Lots of conflict advice! Not a lot of evidence

SELF-MANAGEMENT – IS IT A BENEFIT OR A BURDEN?

- Assessment 1.5 hours
- Follow-up treatments usually 45 minutes twice a year
- Three hours of directed care and the remaining 8,445 hours – self management! = 0.03%
- Cram everything into those three hours... and most are things that patients have to do **DAILY** for **LIFE**
- **Why do patients not want to self-manage?**



VALUE-BASED HEALTHCARE



Value = Outcomes / Cost



- 'Bad legs' for eight years
- Community nurses have been involved for the last six years
- Sees GP monthly
- Been referred to dermatology, vascular services, orthopaedics
- Not 'better', in fact worse now
- What outcomes have been improved?
- Cost?

INDIVIDUALISED APPROACH

Clinical-reported outcome measures

Outcomes for HCPs

- Volume
- Measurements
- ROM
- Muscle strength
- Cellulitis episodes
- Healing of wounds
- Skin
- Pain
- QOL

Cost

Dressings, bandages, times admitted to hospital, times in the GP, ED, community nurse visits, travel costs, phone calls...




Patient-reported outcome measures

Outcomes for Patients

- Shoes and clothes?
- Can I go swimming?
- Pain
- Drive my car
- Not fearful of cellulitis
- Feel so depressed
- Stop the horrible smell
- Holidays
- Will I feel desirable again?

PROMS

HOW DO WE KNOW WHAT'S VITAL TO PATIENTS SO WE CAN HELP THEM?

LYMPROM[®] Lymphoedema Network Wales 

FOR OFFICE USE ONLY

NEW <input type="checkbox"/>	Upper limb <input type="checkbox"/>	Date	Sex M <input type="checkbox"/>	F <input type="checkbox"/>	U <input type="checkbox"/>
F/U <input type="checkbox"/>	Lower limb <input type="checkbox"/>	Patient Age	18-24 <input type="checkbox"/>	25-34 <input type="checkbox"/>	35-44 <input type="checkbox"/>
Intensive Tx <input type="checkbox"/>	Midline <input type="checkbox"/>		45-54 <input type="checkbox"/>	55-64 <input type="checkbox"/>	65-74 <input type="checkbox"/>
			75-84 <input type="checkbox"/>	85+ <input type="checkbox"/>	

Pain scale relating to Lymphoedema

Please indicate your pain / discomfort relating to Lymphoedema with 0 being no pain and 10 extreme pain

none	0	1	2	3	4	5	6	7	8	9	10	extreme
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Heaviness scale relating to Lymphoedema

Please indicate the heaviness relating to Lymphoedema with 0 being not heavy and 10 extremely heavy

none	0	1	2	3	4	5	6	7	8	9	10	extreme
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Using the scale (0 to 10) please indicate the **impact*** Lymphoedema has had on you in the past four weeks (please tick one box only for each row):

**impact is a term used to describe the extent to which Lymphoedema inhibits any aspects of your life*

Home life		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal care		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work	N/A <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finances	N/A <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Body image		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intimacy / desirability	N/A <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anxiety levels		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hobbies		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holidays	N/A <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopping for clothes and/or shoes		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please state any other parts of your life affected by Lymphoedema:

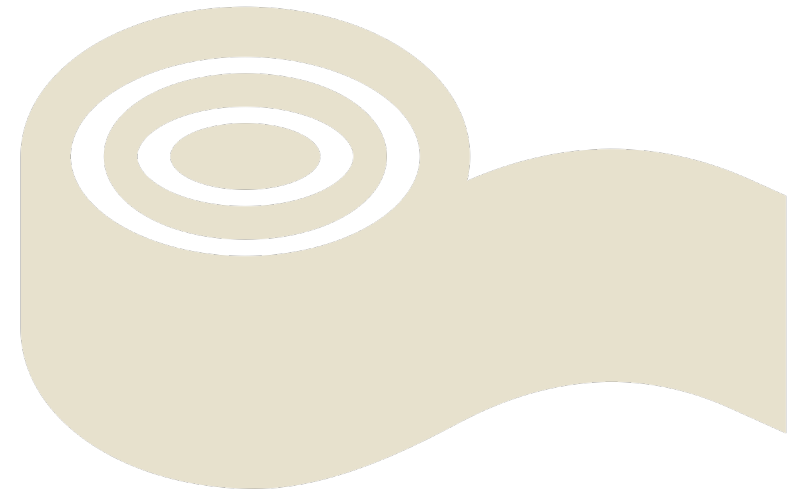
LYMPROM® 2020 LYMPHOEDEMA NETWORK WALES VERSION 1.0 PAGE 1 OF 2

- Patient perspective
- Target care / prioritise need
- Monitor progress / health gains
- Facilitate communication
- Drive quality in care
- Drive value in health

WRAPS

HISTORY OF WRAPS

- First described in 2000 as an adjustable compression device
- Numerous devices available from industry
- Different specifications
- Similar prices
- Foot, calf, knee, thigh and upper limb
- Colours.



PHYSIOLOGY OF WRAPS



- Adjustable Velcro devices — create semi-rigid compression system
- Enables pressure variations within the tissues promoting venous and lymphatic movement
- Low lying pressure/high standing pressure
- Reduced pressure over 24 hours so should be readjusted
- Mimics 50% overlap of bandages
- Reduces oedema and reshapes
- Reduces wound size.

RESEARCH SURROUNDING WRAPS

- Medium to low quality studies have described their use as a substitute for venous leg ulcer compression bandaging and the intensive phase of lymphoedema treatment (Borman et al, 2021; Al Saffar, 2022)
- Night-time support garments (Campione et al, 2021)
- Realistic alternative to stockings for many elderly clients in residential care (Balet et al, 2021)
- Wraps have been shown to produce more consistent and reliable pressure than compression bandages when self-adjusted by patients and give greater independence from the therapist (Partsch, 2019).

INDICATIONS AND CONTRAINDICATIONS FOR WRAPS

- Anyone with oedema?
- Anyone with a wound?

Diagnosed arterial insufficiency ABPI<0.6

What about...

Heart failure? Deep vein thrombosis (DVT)? Untreated cancer?
Cellulitis? Renal failure? Diabetes?

BENEFITS OF WRAPS

- Reusable
- Adjustable, so can be reduced as swelling gets smaller
- Easy to use
- Easy to apply
- Can be worn under clothes
- Can be removed for patient to shower
- Can be used as an adjunct to treatment, i.e. over a garment or over bandages
- Can be used as a mix and match product in the toolbox.

Patient could be in control as to what they feel their lymphoedema needs!

ISSUES WITH WRAPS



Will patients apply the right compression?

- But do nurses apply the optimal compression?



Lack of knowledge, confidence and training with HCP

- Do all wraps do the same thing?



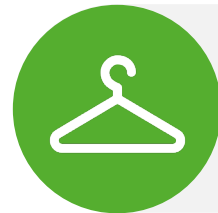
Cost

- Are they really more expensive?



Only used as a last resort

- Why only the last resort? Historic practice? Are they available on tariffs?



Bulky and can be seen under clothes/cosmetic appearance

- Less medical more like sport support?

OUR RESEARCH – ARE WRAPS VALUE-BASED?

Cost impact and outcomes of 50 lymphoedema cases using adjustable compression garments

Melanie Thomas, Ioan Humphreys, Cheryl Pike, Karen Morgan, Rhian Noble-Jones

Aim

- Explore the clinical benefit, impact, outcomes and cost-efficiencies of using a ReadyWrap® instead of previous care.

Methods

- 50 participants with lymphoedema +/- wounds
- Observational before/after design
- Data collection at initial assessment, 3- and 6-month follow-up
- Ethics/consent gained
 - Over 18 years
 - Excluded midline swelling.

Intervention

- All participants received ReadyWrap® with foot, calf +/- thigh
- To wear a minimum of 8 hours to 24 hours.

Data collection

- BMI
- Frailty scores
- BLS/ISL staging
- LWCN outcomes
- LYMPROM
- EQ5D5L
- VAS
- Wound description
- Cellulitis episodes
- Falls
- Resource utilisation
- Volume.

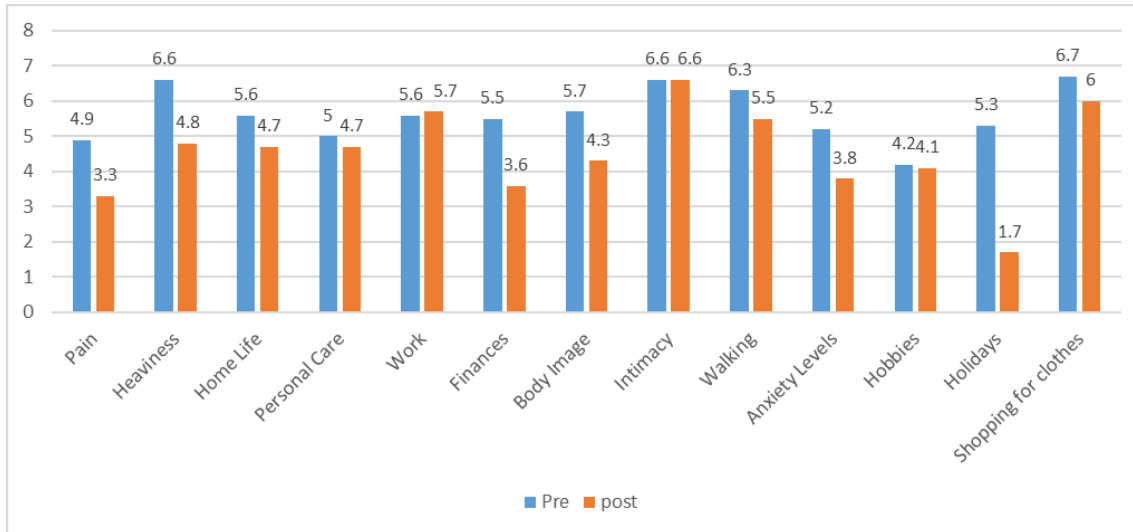
ARE WRAPS VALUE-BASED? RESULTS

Results

- Demographics — **64%** female: **36%** male
- Mean age **68** years
- BMI average **43.2kg/m²**
- **86%** bilateral lymphoedema
- **76%** vulnerable or worse Rookwood Frailty scores
- **82%** complex lymphoedema
- Nearly half had full leg swelling (**48%**) — above knee
- **84%** had foot swelling
- Over half had a wound and **2/3** of those were more than 10–25cm².

43/50
completed the
study

ARE WRAPS VALUE-BASED? RESULTS



- Took patients out of bandages into wraps
- Added wraps over compression garments
- Took patients out of garment into a wrap
- Added wraps over bandages.

- Volume reduced
- Cellulitis episodes reduced from 22 to 7
- Dressings reduced from mean £269 to £187
- Community nurse costs from £942 to £644.

LYMPROM	N	Mean	Std. Dev.	Mean	Lower	Upper	p-value
Physical Health Score Pre	40	17.03	8.75	-3.48	-5.94	-1.01	0.007
Physical Health Score Post	40	13.55	5.92				
Social Health Score Pre	40	25.60	17.08	-2.85	-7.95	2.25	0.265
Social Health Score Post	40	22.75	11.82				
Emotional Health Score Pre	40	11.63	8.37	-1.70	-4.84	1.44	0.280
Emotional Health Score Post	40	9.93	7.55				

SUMMARY

- Overall **costs reduced** from £1,473 to £1,089 = -£384
- PROMS **improved**
- Population had high BMI, frail and elderly, yet **positive improvements** were reported
- Patients reported being **more in control**
- Wounds **healed** with all types improved
- Pain and heaviness **better**.

Frailty, high BMI and age should not be a barrier as wraps can increase independence and maximise self-management!

CASE STUDY ONE

- Bilateral lymphoedema
- Been given antibiotics from GP for cellulitis
- Wound under right foot that leaks
- Community nurses want to bandage but social circumstances are difficult.



CASE STUDY TWO

- Unilateral lymphoedema from gynae cancer
- Works full-time cannot afford to come daily for lymphoedema intensive treatment
- Thigh-length, made-to-measure, flat-knit garments keep falling down
- Main problem is her thigh.



CASE STUDY THREE

- Bilateral lymphoedema
- Heart failure treated
- In below-knee, class 1 compression, circular-knit men's garments, which keep falling down on the left leg at the end of the day causing great distress
- Reacted previously to silicone grip top.



CASE STUDY FOUR

- Bilateral lymphoedema
- Leaking lymphorrhoea
- Toes affected
- Stockinette and bandages saturated within an hour of donning
- Community nurses going in daily.



CASE STUDY FIVE

- Primary lymphoedema
- Wears a full leg wrap device, but swelling is increasing not decreasing
- States wears wrap for eight hours a day.



LET'S TALK!

- Independence
- Shared decision-making
- Listen carefully to what is important to them not us
- Clear understanding of what we can do together
- No data, no problem = no solution



Get in touch on Twitter...

@LymphNetWales

@karen_morgan10 - Karen Morgan

@Lymphwales - Dr Melanie Thomas

LEARN ON DEMAND

Sign up to LeaRn on Demand for support with sizing, application and ordering of ReadyWrap®

<https://lohmann-rauscher.co.uk/learn-on-demand>

If you would like further information on ReadyWrap®, contact:



lrukcustomerservices@uk.lrmed.com

Or contact your local account manager

The image shows a screenshot of the LeaRn on Demand website interface. At the top, there's a search bar and a banner that says "Learn wherever and whenever suits you" with a laptop icon. Below the banner, there's a "Welcome, L&R" section with a "New video" section featuring a video player. The video player is currently showing a video titled "Video - How to measure for ReadyWrap®" which displays a person's leg with a red line indicating a measurement of 2cm. The video player includes standard YouTube controls like play, volume, and progress. Below the video player, there's a description and a "Description" section. To the right of the video player, there's a sidebar with "L&R Product Knowledge" sections for "L&R's Compression Hosiery Range", "ReadyWrap", "Actico and Actico2c Compression", and "Leg Ulcer Hosiery Kits".

PATIENT INDEPENDENCE DAY



L&R and **Wound Care People** are to host a **Patient Independence Day** each year on **4th July**, to highlight self-care for patients with venous and lymphatic disease.

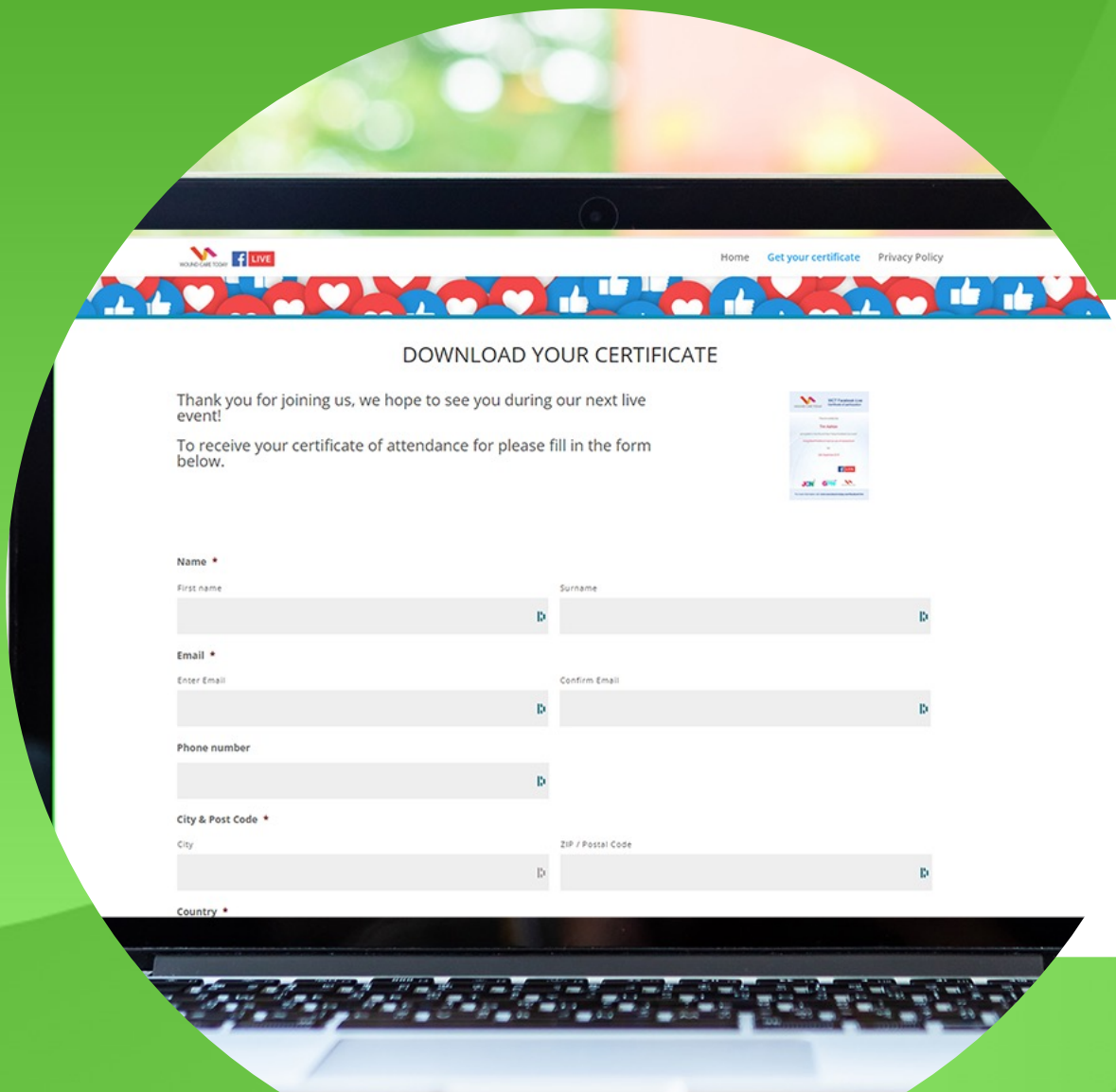
This annual event emphasises the importance of self-care as a sustainable form of care and provides healthcare professionals with updated guidance, information, education and resources to promote patient independence.

REFERENCES & FURTHER READING

- Al Saffar H (2022) How can adjustable Velcro wraps help in the management of lymphedema in the absence of complex physical therapy facilities. *Lymphat Res Biol* **20(4)**: 435–40
- Balet F, Benigni JP, Uhl JF, Chahim M, Filori P (2021) Limitations to self-management of adjustable compression wraps in the elderly: results of a prospective cohort study. *Int Angiol* **40(3)**: 261–6
- Borman P, Koyuncu, E, Yaman A, et al (2021) The comparative efficacy of conventional short-stretch multilayer bandages and Velcro adjustable compression wraps in active treatment phase of patients with lower limb lymphedema. *Lymphat Res Biol* **19(3)**: 286–94
- Bradley M, Nelis L, Reagen M (2017) Using an adjustable compression device to manage venous leg ulceration. *J Community Nurs* **31(2)**: 42–4
- Campione E, Jackson K, Hunley J (2021) Lymphoedema practice patterns: maintenance recommendations. *J Lymphol* **16(1)**: 33–8
- Ehmann S, Bock K (2018) Case report to demonstrate the need for selection criteria for optimal adjustable Velcro wrap prescription. *J Wound Care* **27(Sup1)**: S10–S17
- Ehmann S, Whitaker JC, Hampton S, Collarte A (2016) Multinational, pilot audit of a Velcro adjustable compression wrap system for venous and lymphatic conditions. *J Wound Care* **25(9)**: 513–20
- Gabe-Walters, M., Thomas, M. Developing the Lymphoedema Patient Reported Outcome Measure (LYMPROM[®]) in adult Lymphoedema Services in Wales: examining feasibility, acceptability and internal validity. *Br J Nurs* **30(10)**: 592–8
- Green T (2007) Leg ulcer management in patients with chronic oedema. *Wound Essentials* **2**: 46–58

REFERENCES & FURTHER READING

- Lee N, Lawrence S (2017) Haddenham easywrap: the latest innovation in the management of lymphoedema. *Br J Community Nurs* **22 Suppl 5(Sup5)**: S14–S21
- Mauck KF, Asi N, Elraiayah TA et al (2014) Comparative systematic review and meta-analysis of compression modalities for the promotion of venous ulcer healing and reducing ulcer recurrence. *J Vasc Surg* **60(2 Suppl)**: 71S–90S e71–72
- Mosti G, Cavezzi A, Partsch H, Urso S, Campana F (2015) Adjustable Velcro compression devices are more effective than inelastic bandages in reducing venous edema in the initial treatment phase: a randomized controlled trial. *Eur J Vasc Endovasc Surg* 50(3): 368–74
- Partsch H (2019) Reliable self-application of short stretch leg compression: pressure measurements under self-applied, adjustable compression wraps. *Phlebology* **34(3)**: 208–13
- Tickle J, Ovens L, Mahoney K, Hunt S, Harris E, Hodgman L (2017) A proven alternative to compression bandaging. *J Wound Care* **26(4 Suppl 1)**: S1–S24
- Thomas M, Humphreys I, Pike C, Morkan K, Noble-Jones R (2024) Cost impact and outcomes of 50 lymphoedema cases using adjustable compression garments. *J Community Nurs* **38(3)**: 30–7
- Vowden P, Kerr A, Mosti G (2020) *Demystifying mild, moderate and high compression systems – when and how to introduce “lighter” compression*. Available online: <https://woundsinternational.com/consensus-documents/demystifying-mild-moderate-and-high-compression-systems-when-and-how-to-introduce-lighter-compression/>
- Williams A (2017) An updated review of the evidence for adjustable compression wrap devices in the lower limb. *Nurse Prescribing* **15(Sup10)**: 6–13



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