

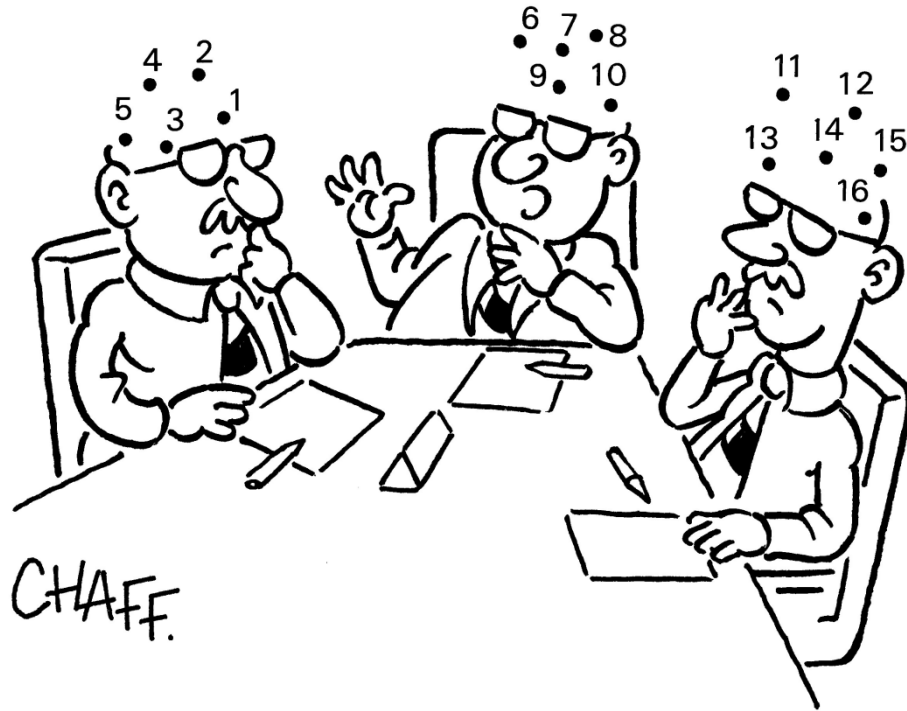
# **Tricks for increasing local pressure**

Alison Hopkins, Chief Executive  
Fran Worboys, Clinical Director

**ICC, @ EWMA 2015**

# Making sense

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"Some joined up thinking is what we need!"

# Standardised Bandaging

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- ▶ Protocol based care enables health care professionals to put evidence into practice addressing what should be done, when, where and by whom at a local level.
- ▶ For a section of the population this management is sufficient and has a number of benefits in that it
  - ▶ Standardises care and reduces variation
  - ▶ Keeps the health care professional or service safe
  - ▶ Offers consistency which can be linked to education and competency
- ▶ However,
  - ▶ The patients condition needs a predictable course
  - ▶ This is not personalised care planning
  - ▶ It does not necessarily address the needs of the complex or difficult to heal patient group – they often need something different
  - ▶ It does not rely on expertise or insight



# VeNUS IV trial Lancet 2014; 383: 871–79

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## Results

- ▶ 2-layer compression hosiery vs. 4LB
- ▶ 457 participants, **equally effective at 99 days**
- ▶ Judged to be venous if no other cause was suspected.
- ▶ Wholly or partly in gaiter region
- ▶ Tolerant of high compression (nurses judgement)
- ▶ 0.8 – 1.2 ABPI
- ▶ Variety of 4LB regimes: 'had to deliver 40mmHg at the ankle'

## Exclusion

- ▶ 2954 excluded
- ▶ 1713 Clinical reasons
- ▶ 464 could not tolerate high compression
- ▶ 183 exudate too high
- ▶ 102 Gross oedema

# Examples of difficult ulcers and oedema



What makes  
them difficult?



# Focus on difficult to heal ulcers

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- ▶ The majority of venous ulcers heal with standard high compression
- ▶ Many are hard to heal despite seemingly consistent and optimal compression bandaging. Common clinical features include
  - ▶ Site of ulcer: retro-malleolar fossa, side of foot, dorsum of foot, base of toes
  - ▶ Abnormal shape of foot: thickened ankle, narrow gaiter and calf
  - ▶ Oedema: particularly localised and especially around the foot and ankle
  - ▶ Lack of tolerance
  - ▶ Other aetiologies: such as Sickle, and Vasculitis
  - ▶ Non-healing venous despite standard high compression: post thrombotic syndrome
  - ▶ Significant pain
  - ▶ Extensive atrophie blanche
  - ▶ Biomechanical changes in the foot with fixed ankle and altered gait



# Traditional response

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The traditional response to difficult to heal ulceration has tended to be to concentrate on

- ▶ Standardising care
- ▶ There is the assumption that the compression being delivered is therapeutic and enough
- ▶ Changing the dressing being used
- ▶ Alternative and advanced modalities
- ▶ Strategies to improve patient well being
- ▶ Focussing on patient behaviours; blaming the patient for non concordance or lack of tolerance

..... Continue doing the same thing over and over, round and round



# Developing a strapping technique

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**‘Compression strapping: the development of a novel compression technique to enhance compression therapy and healing for ‘hard-to-heal’ leg ulcers’**

Hopkins A, Worboys F, Bull R, Farrelly I. **2011**

Int Wound Journal 8:474-83

**Using strapping to increase local pressure.**

Hopkins A, Worboys F, Partsch H **2013**

Veins and Lymphatics. Vol 2, 12



# Fan strapping

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# Sub-bandage pressure studies

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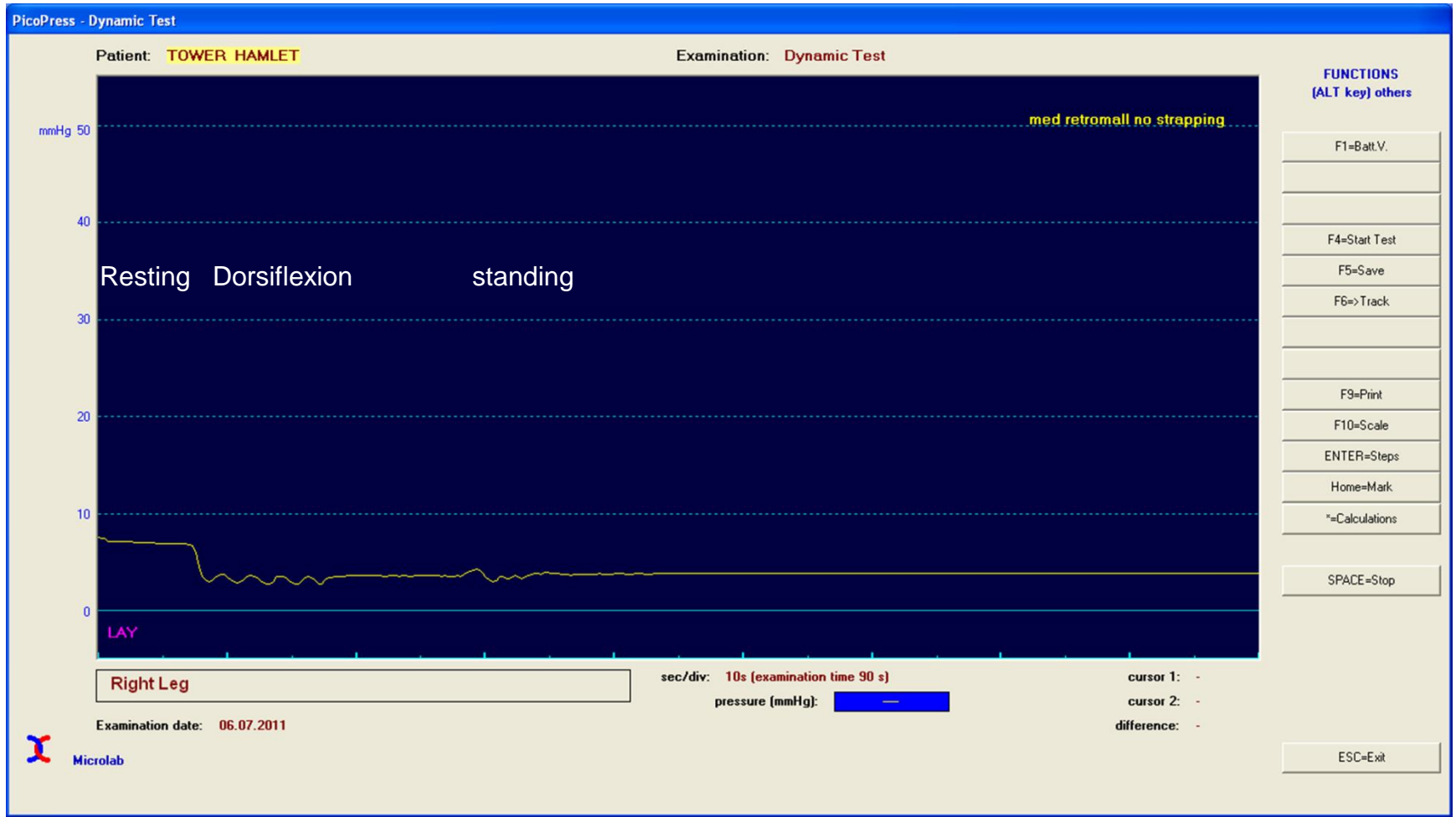
**BI and medial retromalleolus**



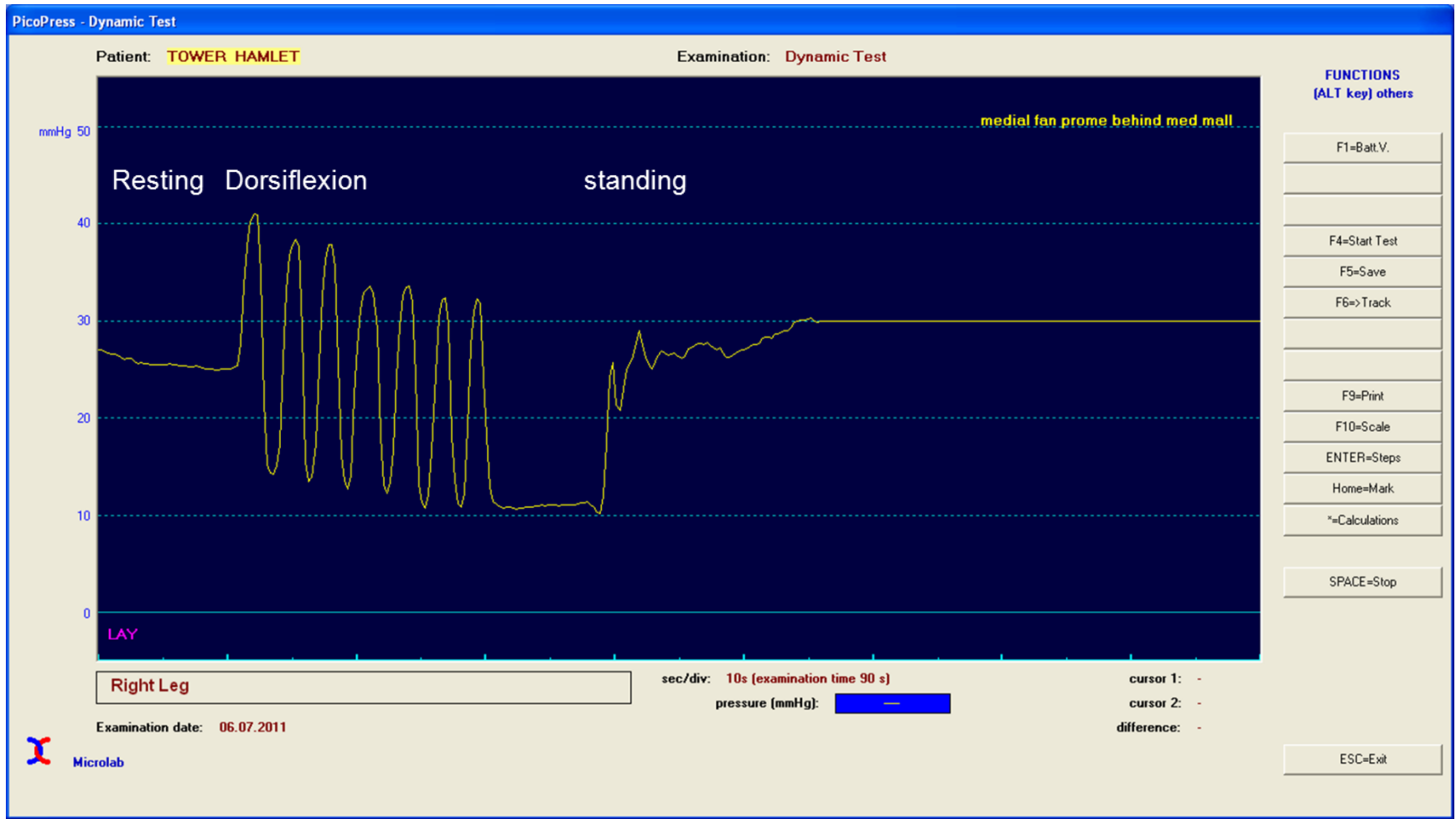
**Lateral retromalleolus**



# Medial retromalleolar fossa: No straps



# Medial retromalleolar fossa: Fan straps



# Tricks include

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1. Creating **therapeutic** compression for the patient and limb:
  - ▶ More than a focus on BI or gaiter
  - ▶ Not increasing the layers unless required and tolerated
  - ▶ Tall men or PTS need very high compression
2. Creating compression that tackles the site of the ulcer and the application of local pressure
  - ▶ Supports anatomical structure
3. Adapting compression to the site or position of the oedema
4. *A strategy to improve general mobility and function*
5. *A strategy for consistency*



# Enhancing Compression video

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- ▶ [Fran Worboys](#), Clinical Director



# Sickle Cell ulceration

Note guttering



# Wet malleolar ulcers



8 weeks later



5 months later





# Strapping varieties

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# Chevron strapping

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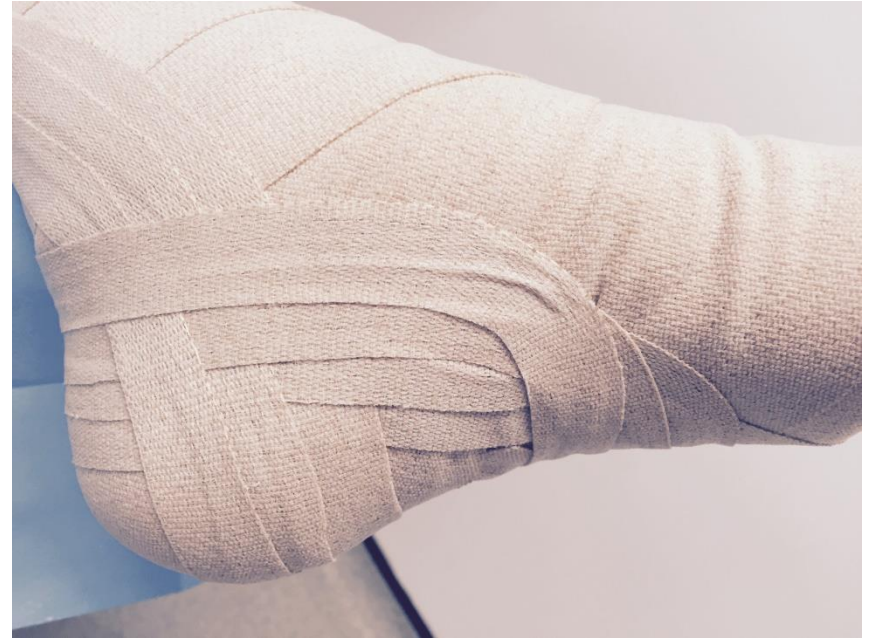
# Acute Atrophie Blanche

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# Foot strapping

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# Forefoot ulceration

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3 weeks later



# Forefoot strapping





# Withered calf, deformed feet and ankle

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# Impact of Pronation







# When the Achilles or heel is at risk

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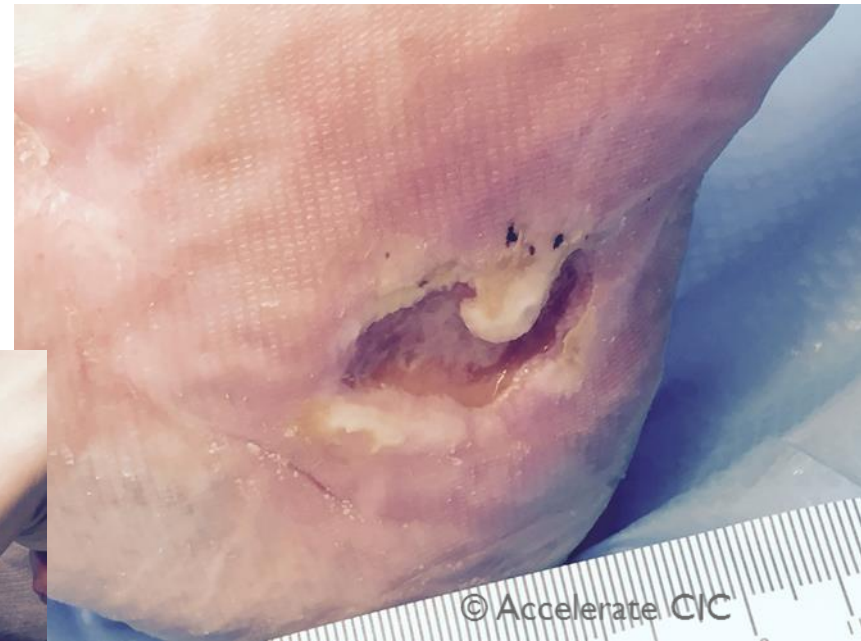
# Alternative straps



# Retro-malleolar Ulceration

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- Overs 65 years of ulceration





# The complex patient

- ▶ 65 year history
- ▶ The presence of scar tissue
- ▶ Gait deformity
  - ▶ Severe pronation
  - ▶ Reduced AROM
  - ▶ Leg length discrepancy
  - ▶ Frequent falls



# What do patients say?

That straps  
play an  
important  
role in their  
treatment

Recognise that  
each nurse  
applies  
differently

That it is the  
principle of  
supportive  
pressure, not  
the technique

That  
consistency of  
care and  
review is **VERY**  
significant

They  
squeeze in  
the right  
place

They  
reduce my  
pain

I feel more  
stable

They  
work on  
the  
swelling

They  
support my  
foot and  
ankle

My ulcer is  
healing

It improves  
my walking

5

4

3

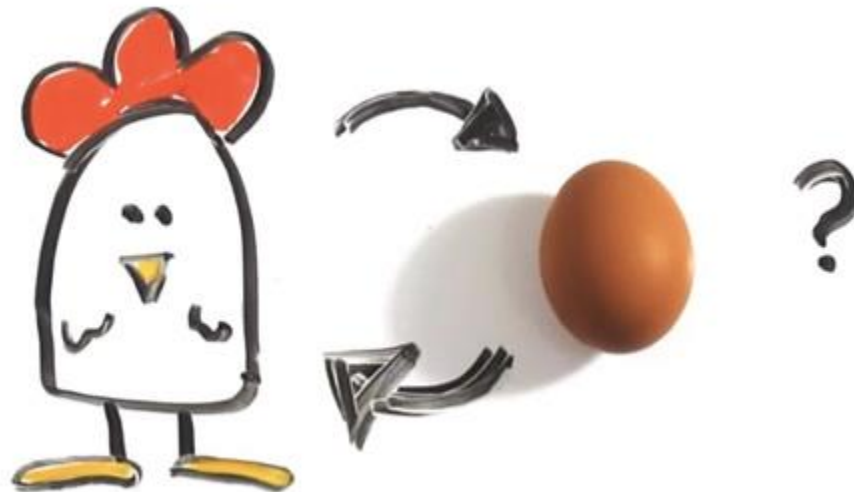
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# The significance of consistency

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# Thank you

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Hopkins a, Worboys F (2015) Establishing community wound prevalence within an inner London borough: exploring the complexities. *Journal of Tissue Viability* 24, 42-9