

OFFLOADING

....ARE YOU UNDER PRESSURE?





What will be discussed today.

Offloading – Definition.

Why – Discovering the need.

How – Exploring the methods.

Examples – Case histories.

Definition

Transference of forces away from
a point of pressure or over-loading

This is the overall aim of any intervention

Why?

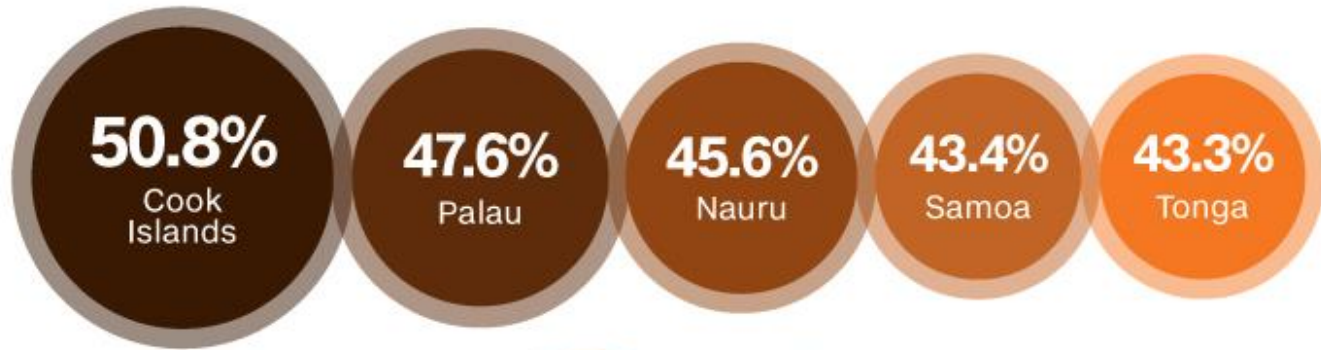
To prevent or treat a



“Foot attack”

MODERN GLOBAL EPIDEMIC TYPE II DIABETES

GLOBAL TOP 10 OBESE COUNTRIES/TERRITORIES 2014

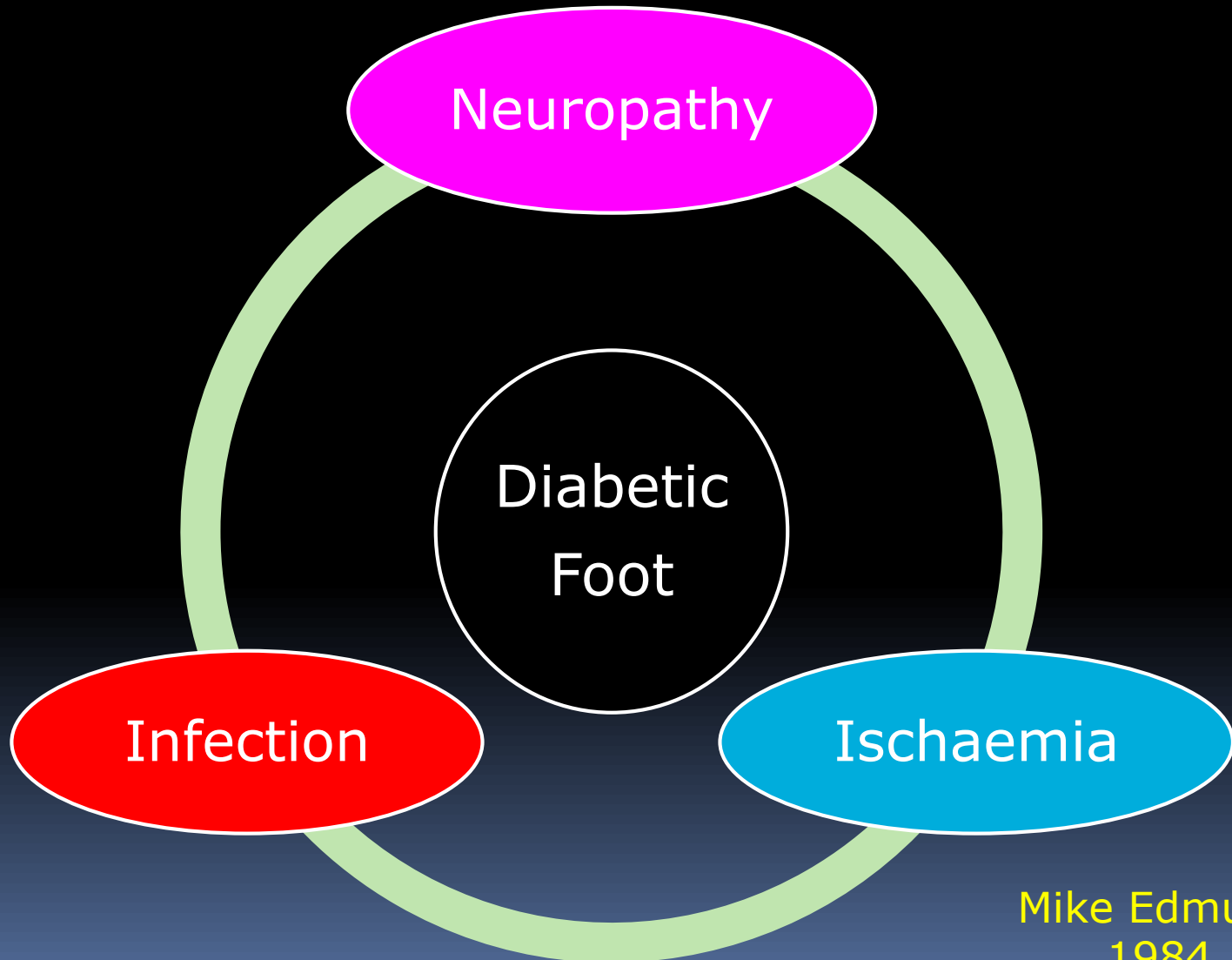


A.G.E.s

"The pathobiology of diabetic complications: a **unifying mechanism**".

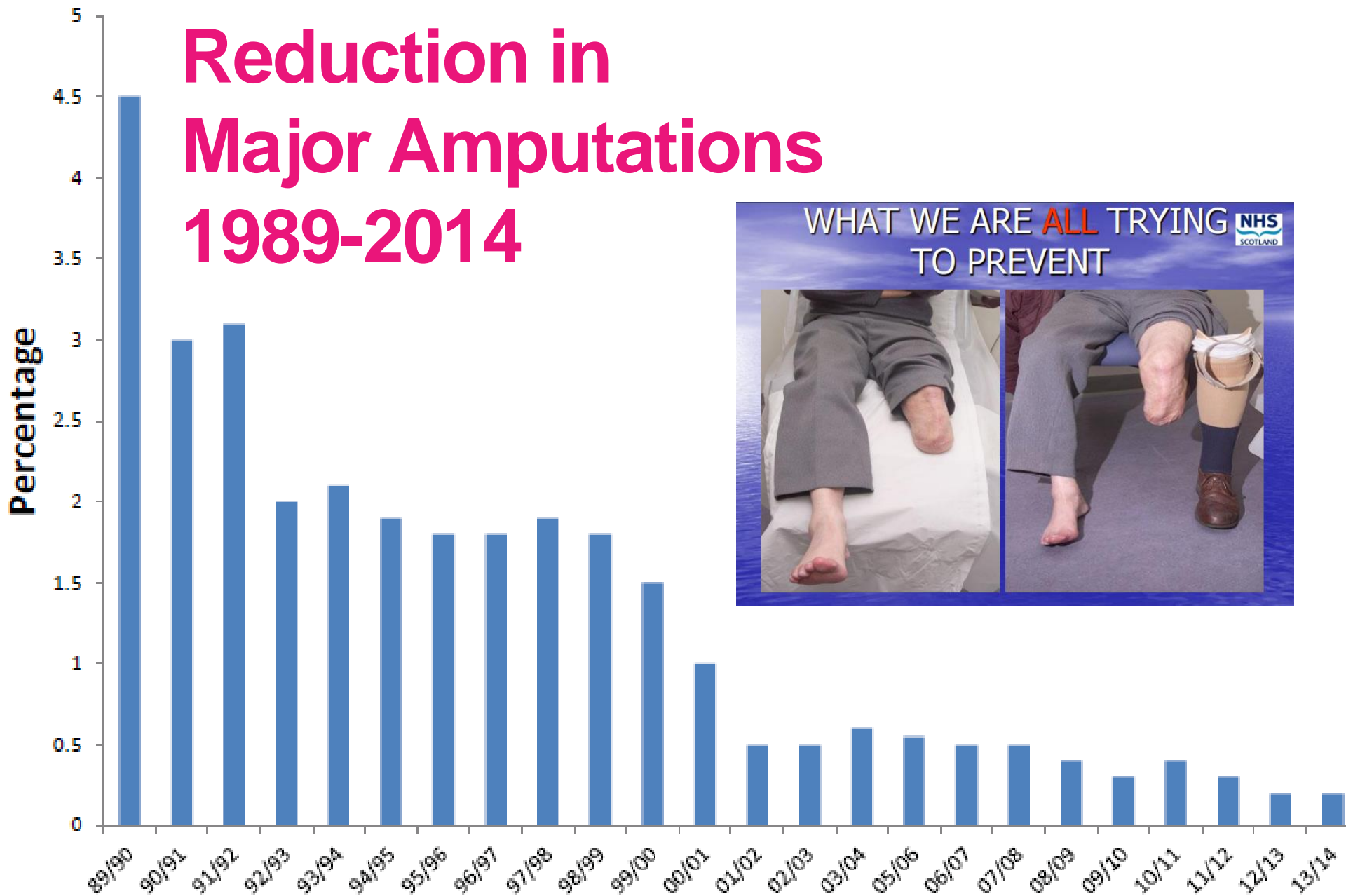
Organisation for Economic Co-operation and Development 2014

"Complex and Vulnerable"



Mike Edmunds,
1984

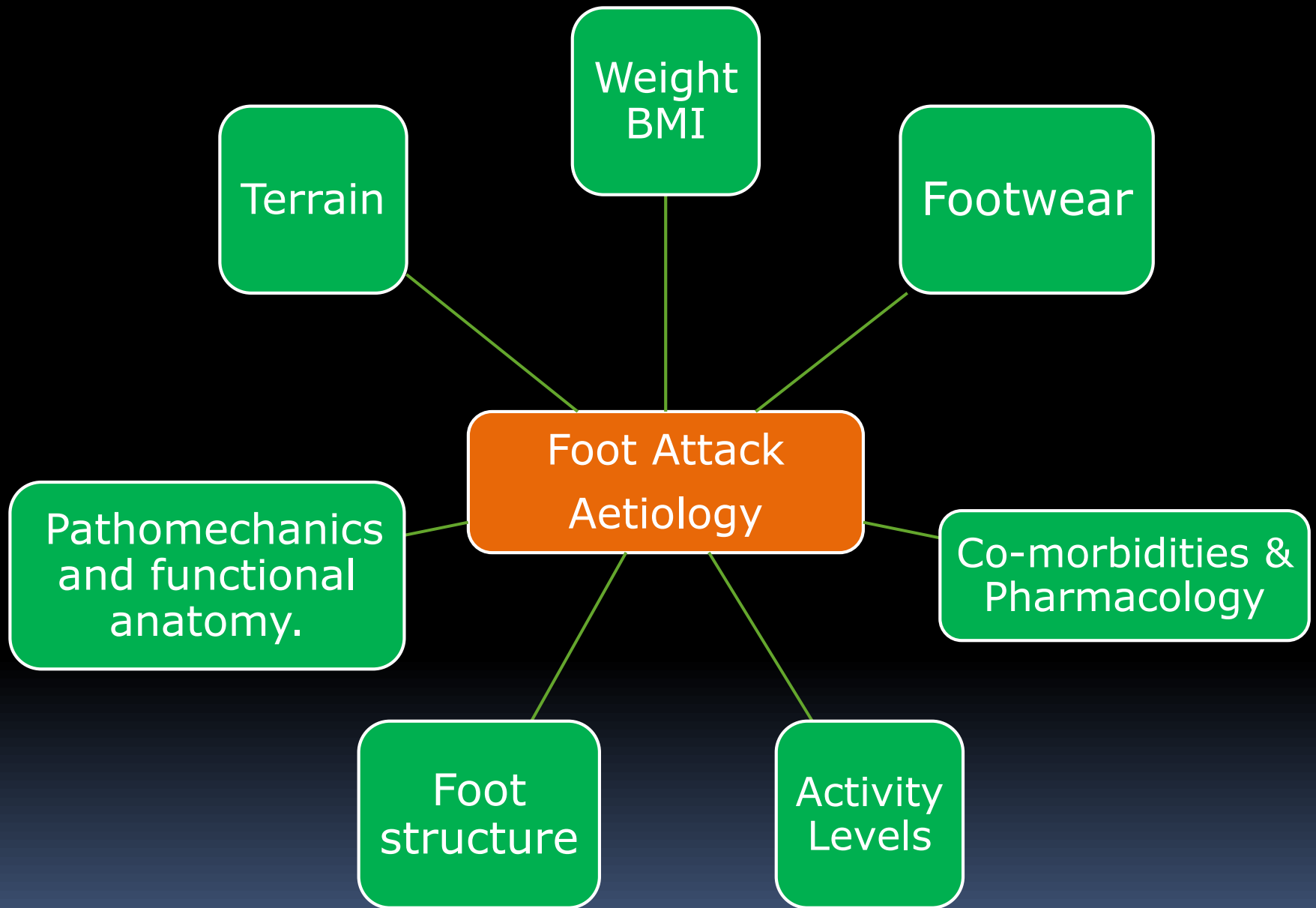
Reduction in Major Amputations 1989-2014



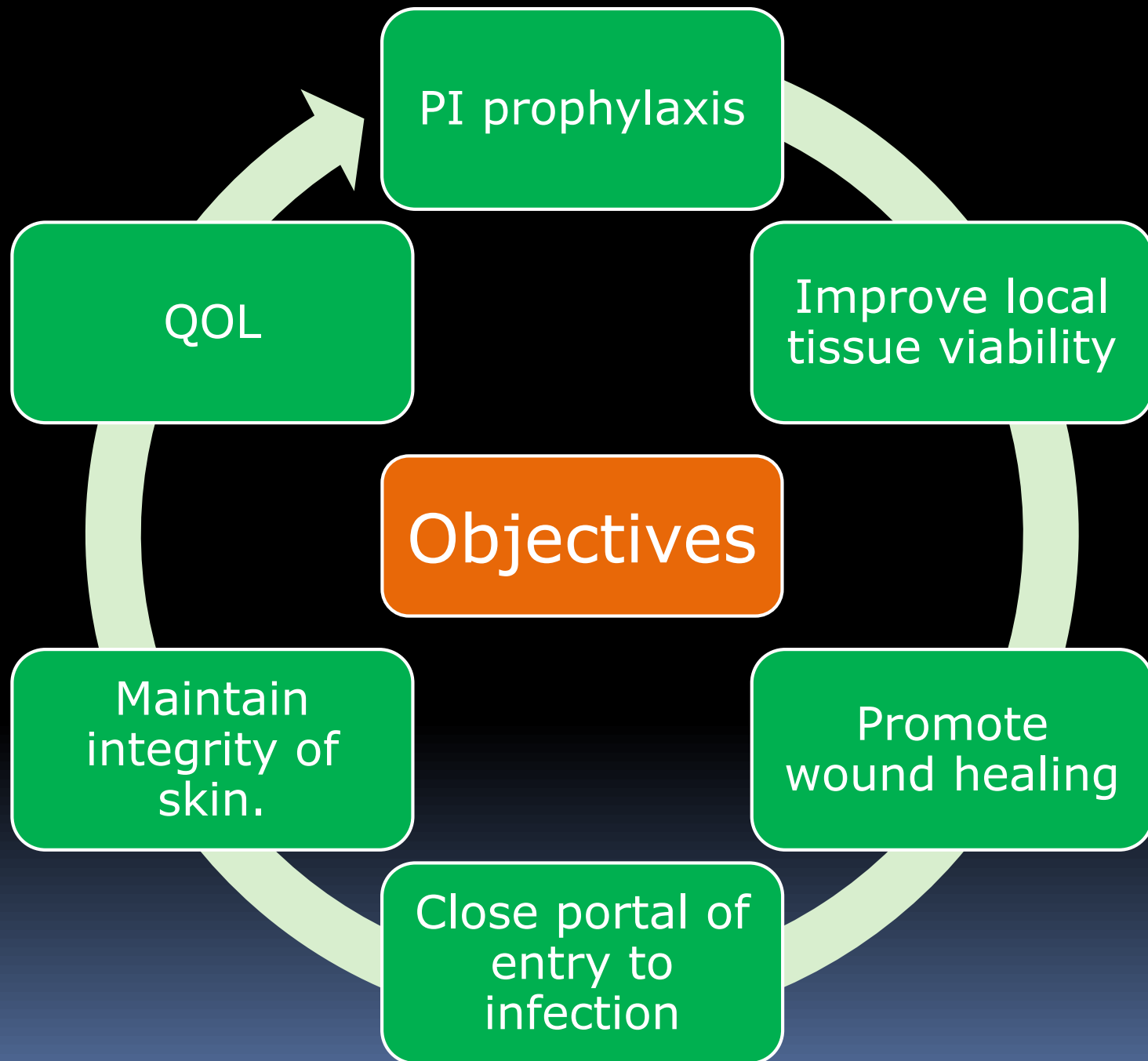
Rubio *et al* 2014

Aetiology
of

“Foot attack”




Objectives Of Treatment





MDT Strategy of DFU care.

- **Metabolic control**
 - **Educational control**
 - **Mechanical control**
 - **Vascular control**
 - **Wound control**
 - **Microbiological control**
- 

How?

Fixed devices.

Orthopaedic felt, Wadding and layered bandaging.



This strategy is a holding treatment, filling in the contours to offload while the patient is referred to the Foot Protection Service.

Total Contact Cast.



Specialist knowledge needed: limb swelling > constriction > ischaemic episode. Therefore best practice, don't use if patient lives 1x hour+ from hospital

**Removable
devices.**

Scotch-cast bootee/clam casting.



Apertures are out of fashion as wound can herniate through gap.
Clam (bivalve) casts have a top and bottom and are bandaged together to form a TCC around the foot and ankle

Off loading shoes



Reduces pressure sub fore-foot by over half. By shifting body weight to the mid-foot and heel.

NB: consider effect of neuropathy on gait. Inappropriate dispensing could result in trips and falls. Knowledge and training is needed to dispense these items.

Cast walkers Moon and Cam boots.



Mean pressure reduction based on height of device.
HOWEVER these are flat inside and you will also need to
construct a TC inlay.

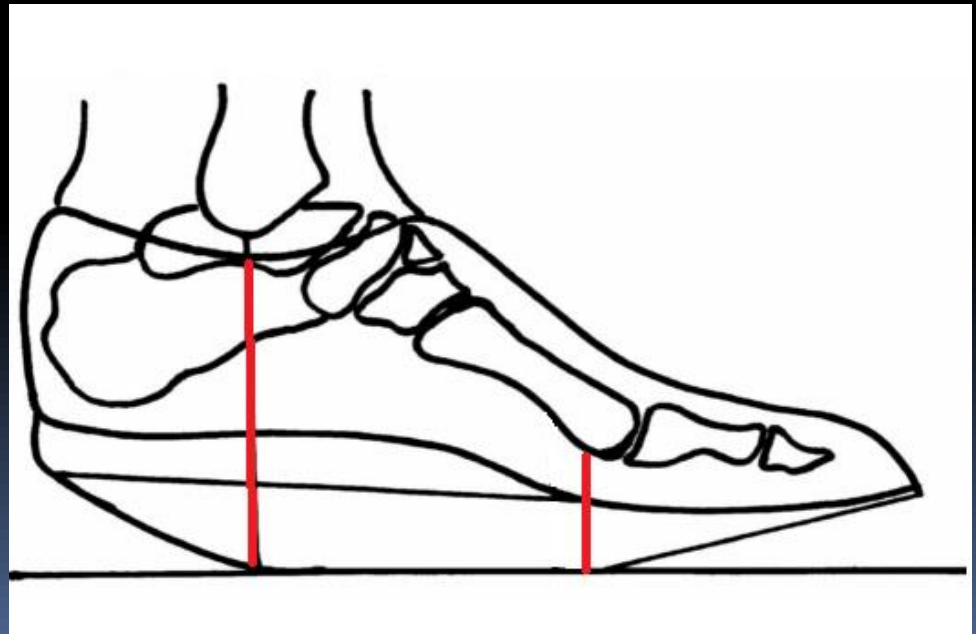
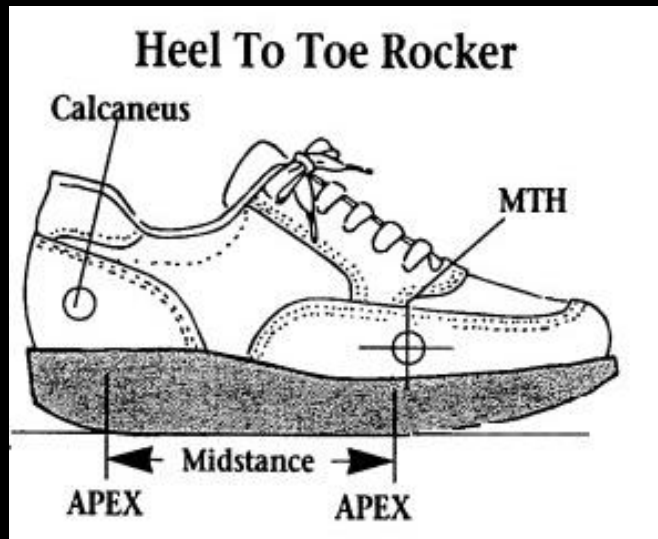
Special walkers: T-Brace.



.....And later,

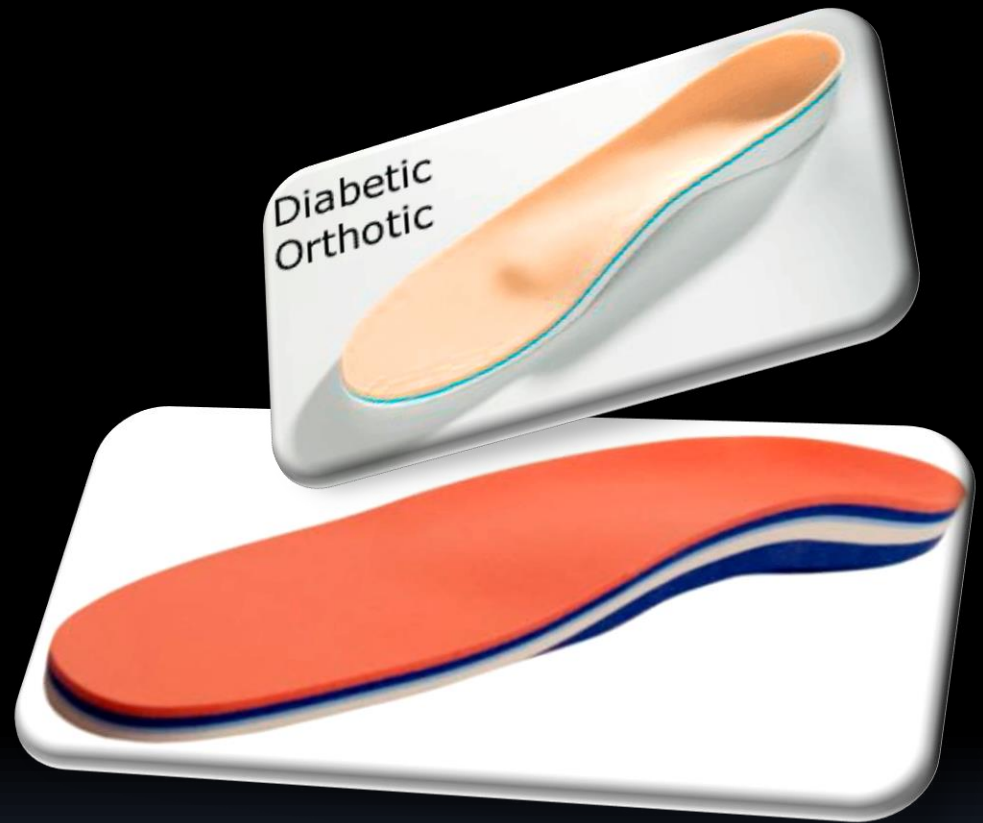
We may move on to other
devices such as.....

Shoe Modifications.





Custom shoes
and Orthotics.



Casted inlays:
direct / last form

Case Studies.

Patient A



TYPE II DIABETIC

LOPS

OA & Gout

Heart Failure



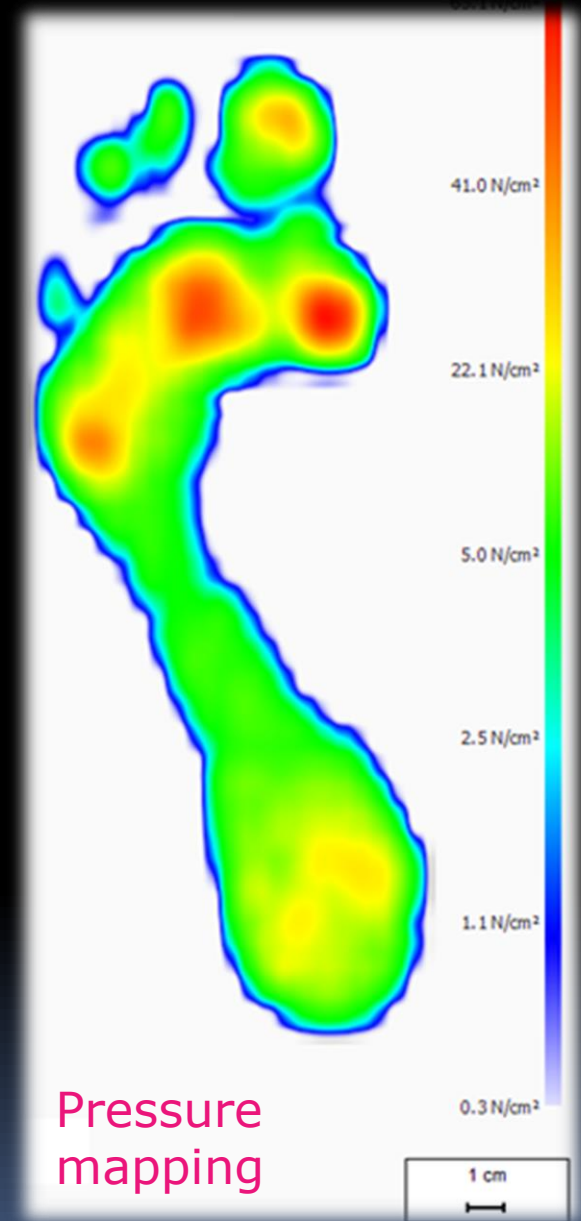
Chronic Renal
Failure

Ischaemic Heart
Disease

Pathomechanics



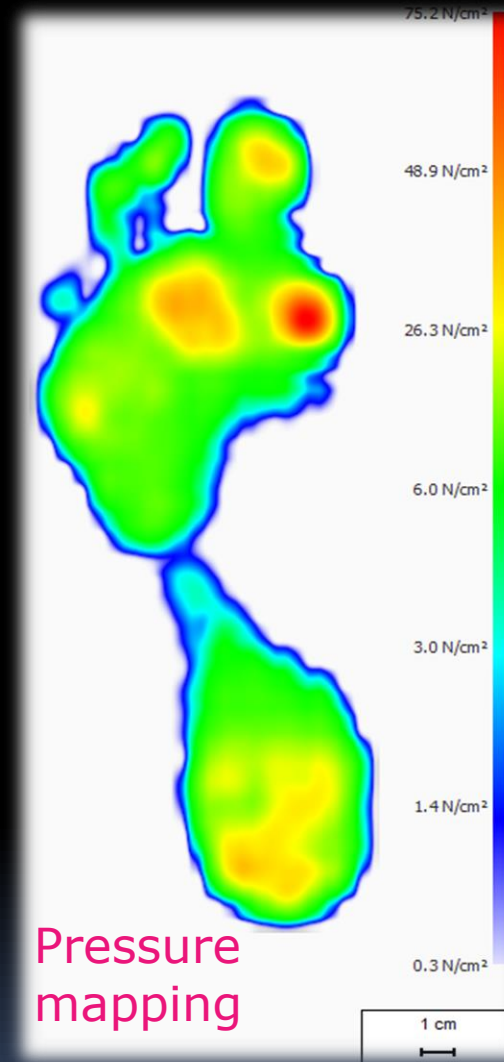
Spot early signs of PI as well a scar from previous ulceration



Intervention

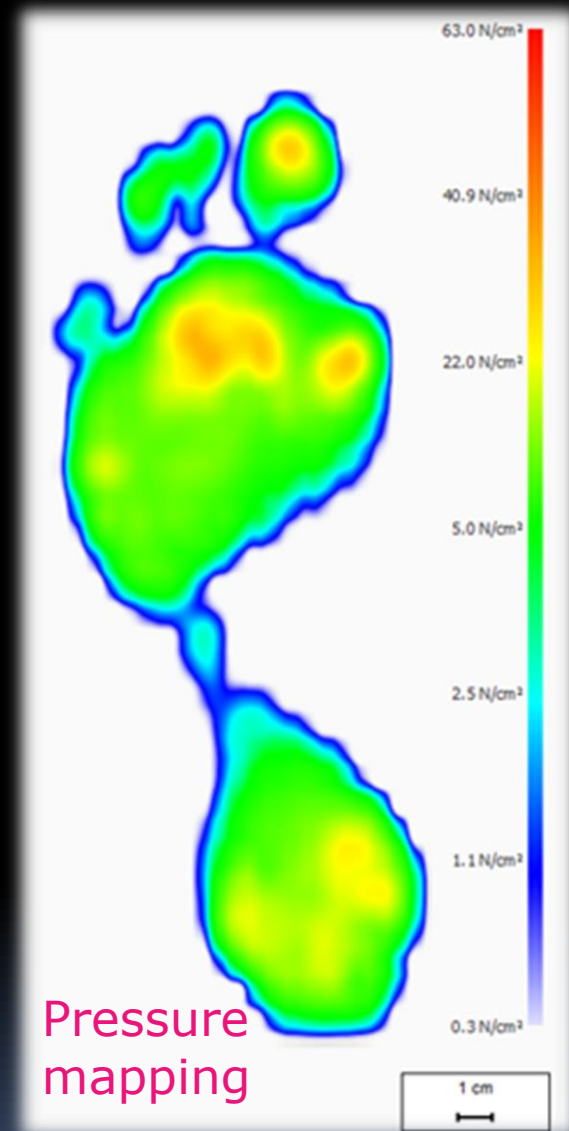


For A. Increased Pressure !!!



To design an intervention you need to understand biomechanics/functional anatomy or you might make things worse.

“One strategy will not apply to all”.

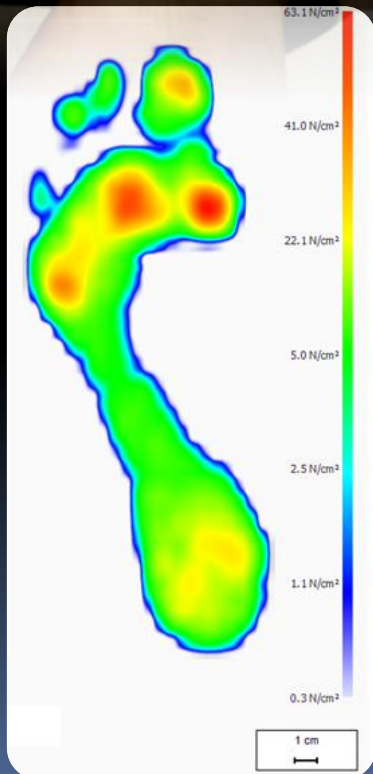


Intervention

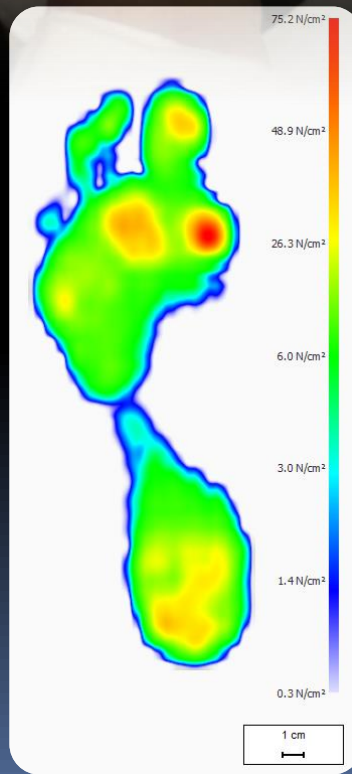


Modification=pressure reduction

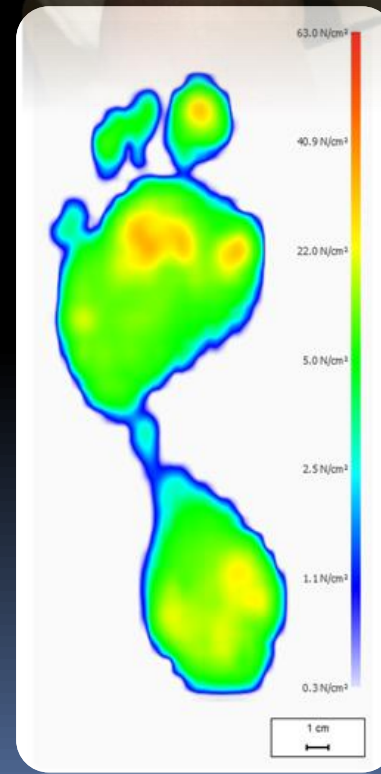
Concept demo only....FYI Felt failed in 2 hours. Pressure was back!



Pressure



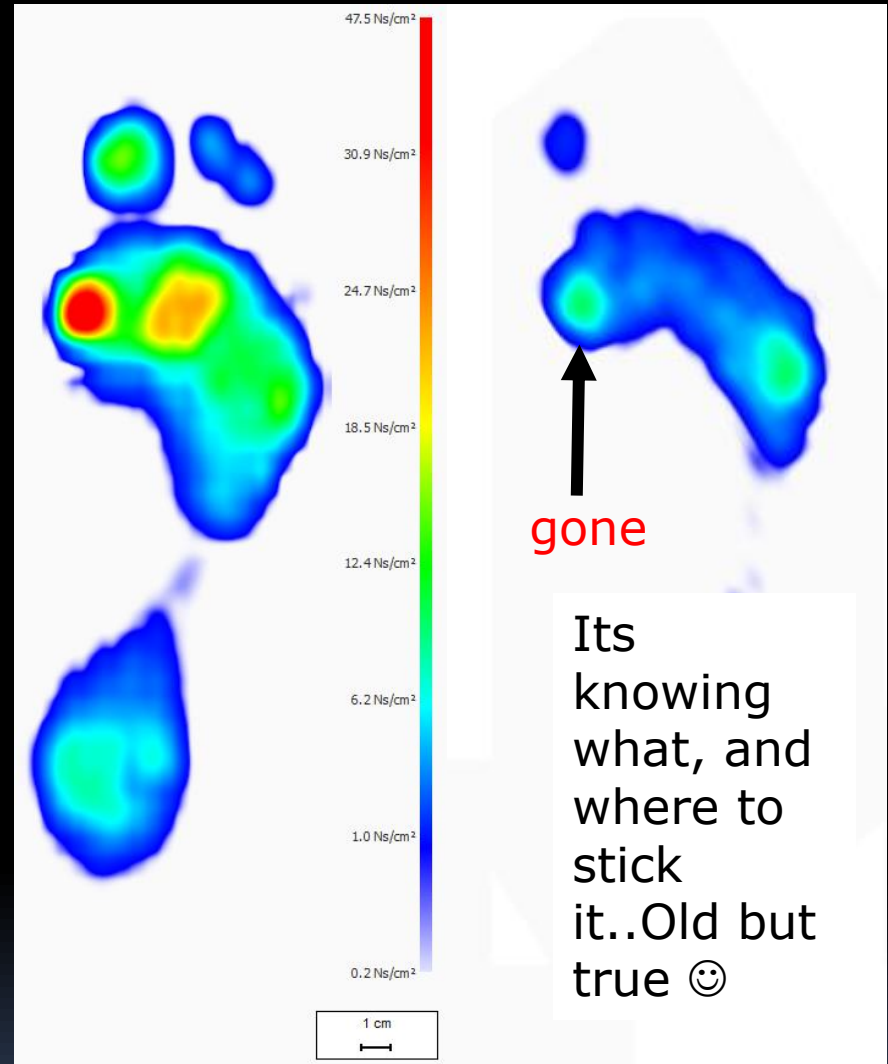
Increased pressure



Reduced Pressure



Addition of a 6°
rear-foot post



Before

After

Thorough knowledge of biomechanics is needed for these interventions

Patient B 

TYPE II DIABETIC

LOPS to
the knee

Triple bypass
Ischaemic heart
disease

Poor
glycaemic
control/poor
adherence

CVA

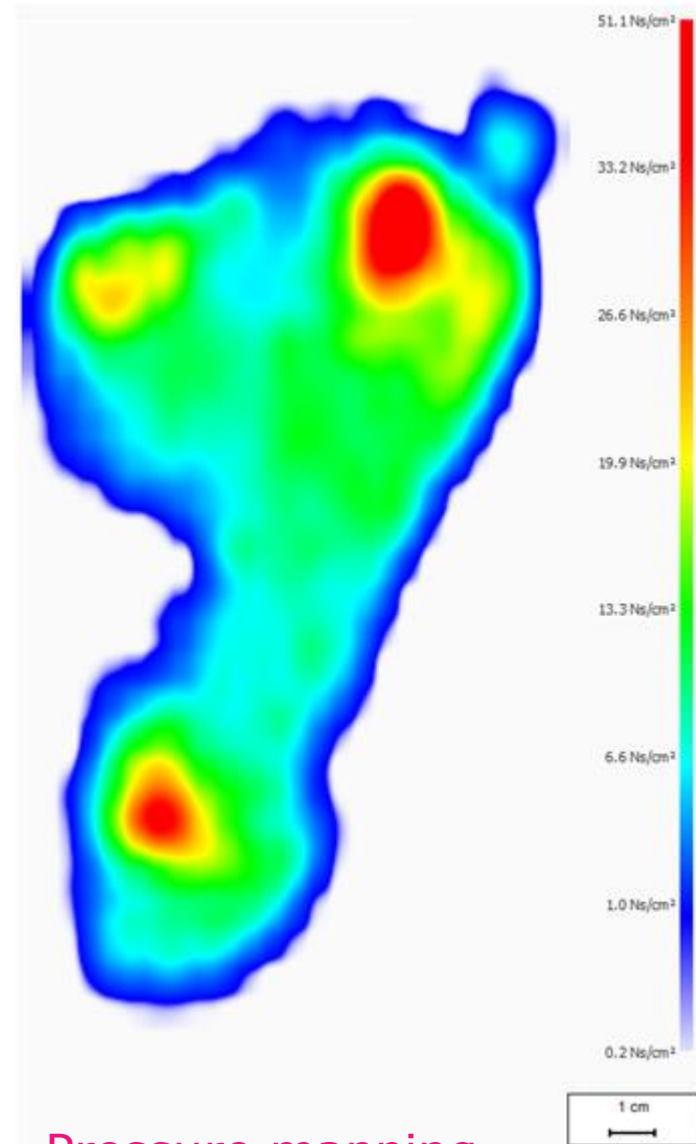
Previous
ulceration
episodes

Previous
amputation and
surgical
debridement

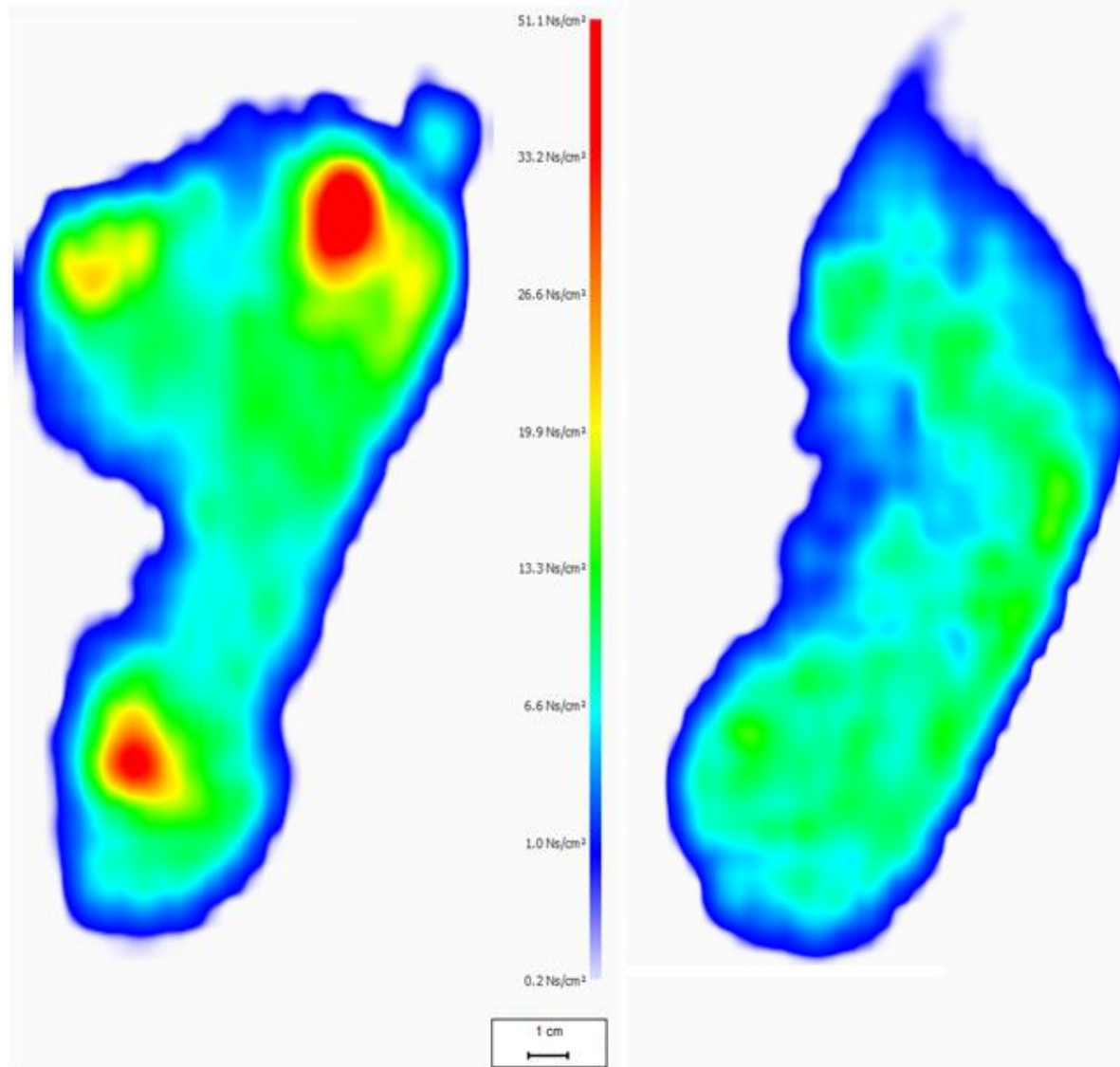




Starting point



Pressure mapping



Before TCC

With TCC



4 years in a
rocker bottom
cast Boot



One week
of TCC



Three weeks
of TCC

(Healed!)

Challenges:

- Variation in practice and different levels of organisation of care between different DHBs
- Variable organisation of and access to specialist diabetic podiatry services
- Availability of healthcare professionals with expertise in the management of diabetic foot problems
- Foot protection service should be led by a podiatrist with specialist experience in diabetic foot problems

NICE, 2015

“Patients with no contact with a MDT-High risk foot service represent the majority of hospital admissions for DFUs.”

“This group on population estimates appears to be at high risk of amputation of the lower extremity and therefore early referral of this high-risk group might lower this risk.”

Plusch *et al* 2015

Points of Reflection:

Consider appropriate methods of referral.

- ALL ACTIVE FOOT ULCERATION SHOULD BE REVIEWED BY THE HIGH RISK FOOT CLINIC FOLLOWING THE MDT MODEL OF CARE.
- IF AN ADMISSION IS INVOLVED THE MDT FOOT SERVICE SHOULD BE INFORMED.

Podiatry is integral to successful treatment of DFU

(known and evidenced since Edmunds 1984)

Allied health



Alliance for best
practice

T.E.A.M.

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MCDHB

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