



INTRODUCTION TO MDT APPROACH FOR DFC

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The World Health Organization and the International Diabetes Federation have stated that up to 85 percent of diabetic lower extremity amputations are preventable

But every 20 seconds a lower limb is amputated due to complication of diabetes



WHY MDT'S ?

One study found that over 11 years the total amputations fell by 70 % after using MDT krishnan S, nash F, baker N, et al.

DIABETES CARE 2008

All the major guidelines recommend that patients identified with new DFUs should be referred to a dedicated MDT

INTERNATIONAL BEST PRACTICE

BEST PRACTICE GUIDELINES: WOUND MANAGEMENT IN DIABETIC FOOT ULCERS



International Best Practice Guidelines: *Wound Management in Diabetic Foot Ulcers*.
Wounds International, 2013. Available from: www.woundsinternational.com

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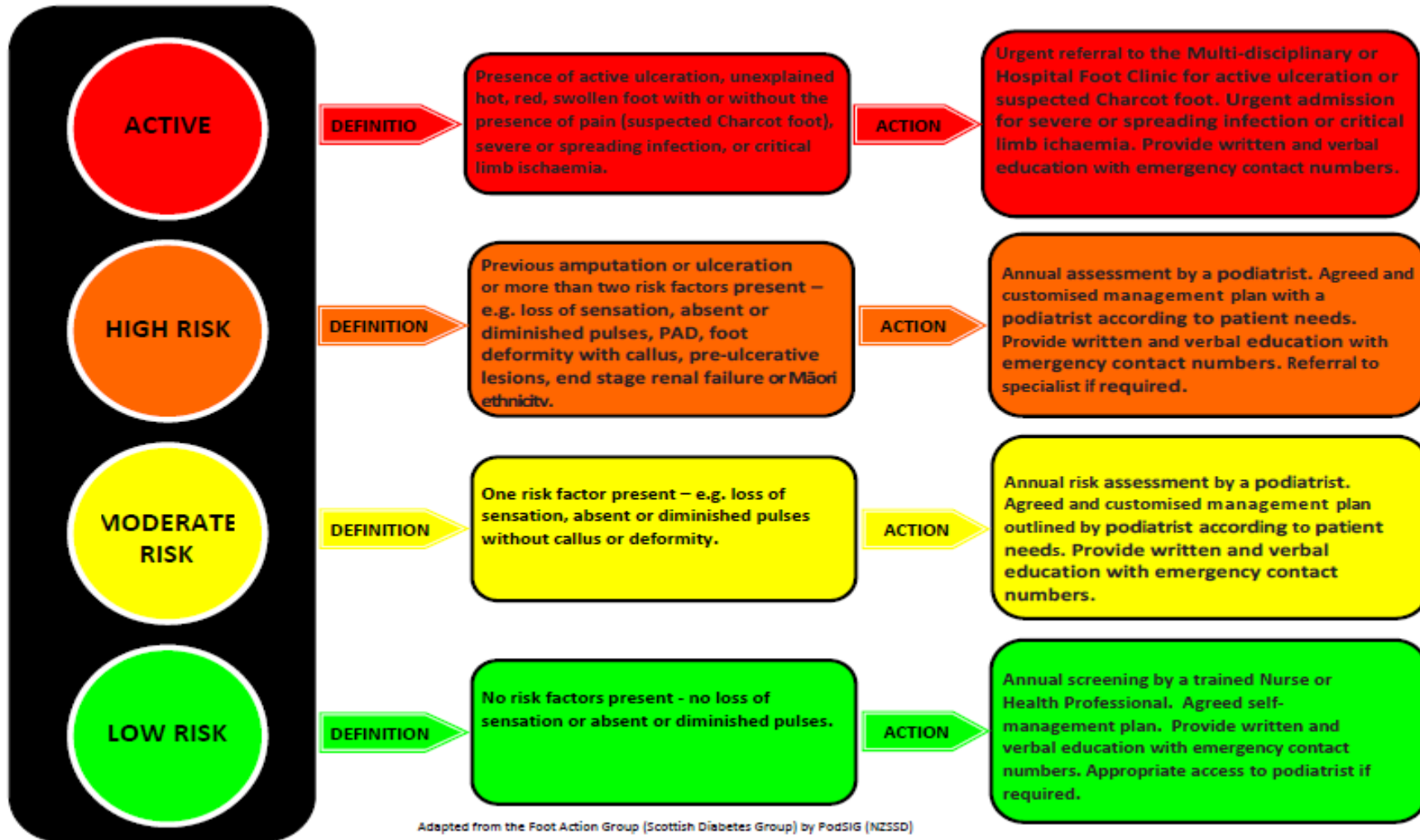
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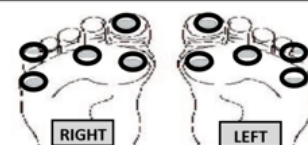
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APPROPRIATE SCREENING AND REFERRAL



ASSESSMENT

PATIENT DETAILS	Name			NHI	
	Address			DOB	
				AGE	
	Phone		Ethnicity		
	GP				
	Practice		Phone		

DIABETES FOOT SCREENING		
NEUROLOGICAL TESTING	10g Monofilament Testing Sites 	Loss of protective sensation (LOPS) if < 11 sites detected from both feet <input type="checkbox"/> / 12 sites LOPS yes no
		Painful neuropathy (pain, paraesthesia, numbness, burning, sharp) yes no
		Specify
		<input checked="" type="checkbox"/> Detected <input checked="" type="checkbox"/> Not detected

VASCULAR	RIGHT FOOT		LEFT FOOT	
	Palpable Dorsalis Pedis	yes no	Palpable Dorsalis Pedis	yes no
	Palpable Posterior Tibial	yes no	Palpable Posterior Tibial	yes no
	Previous Vascular Surgery	yes no	When?	
	Intermittent Claudication	yes no	Night or Rest Pain	yes no
	If yes (describe)			

RISK FACTORS	Previous diabetes amputation	yes no	Previous ulceration	yes no
	Significant structural foot deformity	yes no	End stage renal failure	yes no
	Significant callous / pre-ulcerative lesion	yes no	Māori Ethnicity	yes no
	Foot care: patient is capable or has help to self-manage foot care	yes no		
	Others (specify)			

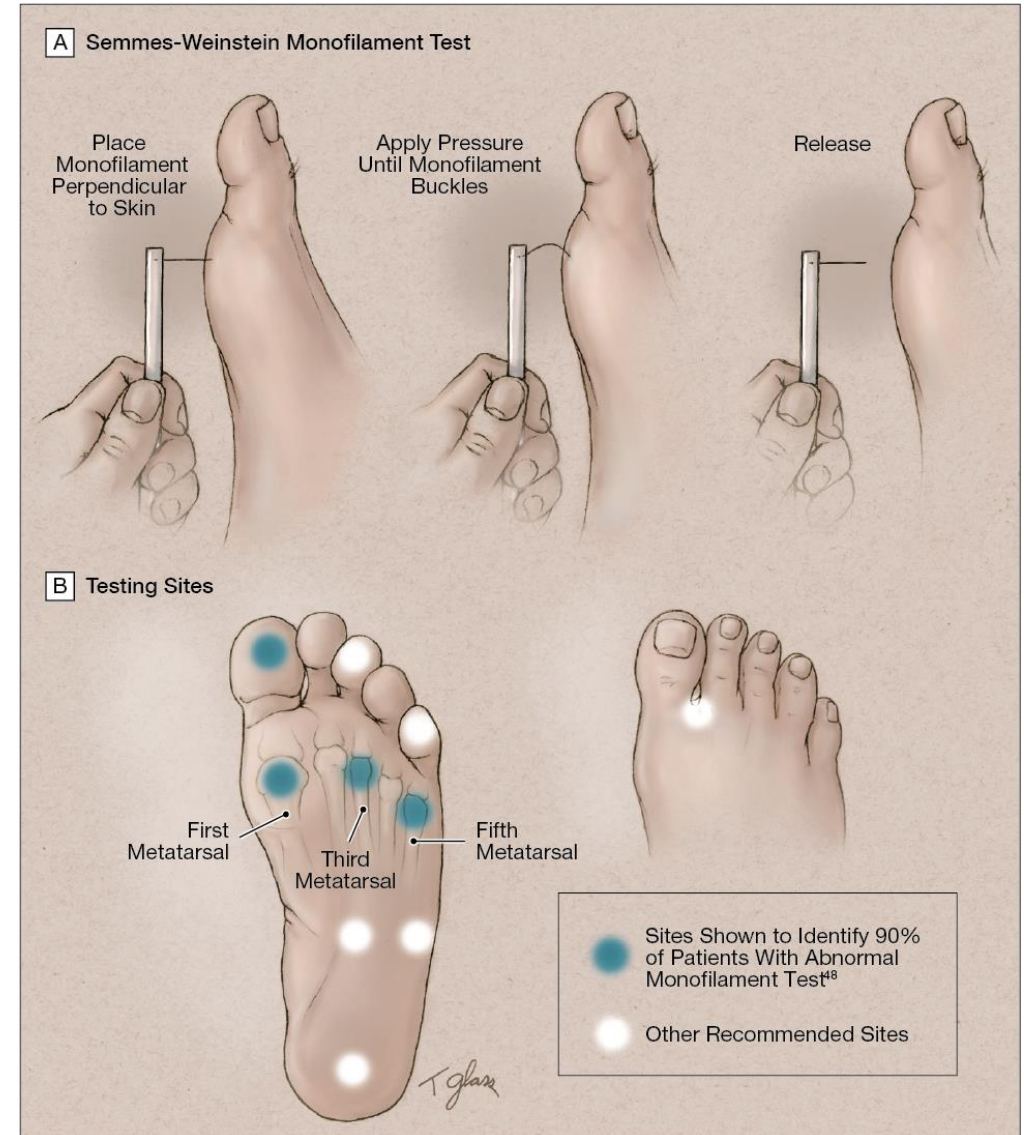
MEDICAL HISTORY				
Type	DM1	DM2	Duration	
Treatment	<input type="checkbox"/> insulin <input type="checkbox"/> OHAs <input type="checkbox"/> diet			
Latest HbA1c		When		
Random BGL		CVD Risk		%
Renal	eGFR	Creatinine		
Smoker	yes no	ABC Provided	yes no	

RISK STRATIFICATION	
LOW RISK FOOT	
No risk factors present e.g. no loss of protective sensation or absent or diminished pulses.	
ACTION	
Annual screening by a suitable trained nurse or health professional. Agreed self-management plan. Provide written and verbal education with emergency contact numbers. Appropriate access to podiatrist if required.	

MODERATE FOOT	
One risk factor present e.g. loss of sensation, absent or diminished pulses without callus or deformity.	
ACTION	
Annual risk assessment by a podiatrist. Agreed and customised management and treatment plan outlined by podiatrist according to patient's needs. Provide written and verbal education with emergency numbers.	

HIGH RISK FOOT	
Previous amputation or ulceration or more than two risk factors present e.g. loss of sensation, absent or diminished pulses, PAD, foot deformity with significant callous formation, pre-ulcerative lesions, end stage renal failure or Māori ethnicity.	
ACTION	
Annual assessment by podiatrist. Agreed and customised management and treatment plan by podiatrist according to patient's needs. Provide written and verbal education. Referral for specialist intervention if/when required.	

ACTIVE FOOT DISEASE	
Presence of active ulceration, unexplained hot, red, swollen foot with or without the presence of pain (suspected Charcot foot), severe or spreading infection or critical limb ischaemia.	
ACTION	





INTERNATIONAL GUIDELINES FOR THE TREATMENT OF DFU

1. Debridement
2. Dressings
3. Off-loading
4. Management of Infection
5. Vascular reconstruction
6. Amputation

THE TEAM

Orthopedic surgeon

Orthotist

Podiatrist

DNS

Vascular surgeon

WCNS

Endocrine consultant

Microbiologist

NP



Weekly planning meetings

Weekly DFC

DFC SDHB GOALS

- Optimal diabetic control
- Effective local wound care
- Infection control
- Pressure relieving strategies
- Monitoring and improving Vascular status
- Integrated Care Approach
- Patient education / support

CHRONIC WOUND CARE

- Is complex and often decreases quality of life for the patient
- Multiple health professionals involved
- Studies include lived experience, treating underlying conditions, various treatment options / products, support groups, implementation of guidelines / practice changes and many more.
- Need to look at the problem differently...

Patricia Grocott *et al*, in (2013) launched a project to help design dressing retention garments for Epidermolysis Bullosa using experience-based co-design between patients and clinicians to redesign and improve service delivery. A prototype was then developed and tested with clinicians and patients providing valuable input.

'compliance', where patients are responsible for their choices **and** the consequences of those choices (Aujoulat et al., 2008).

Practice point

It can be very difficult to maintain motivation to adhere to treatment or keep to lifelong changes in behaviour. Think about ways in which you could help patients with this ongoing problem.

You might want to think about the following tips:

- Patients are all different **and** need advice that suits the way they live their lives: a more personal approach often makes it easier for patients to accept advice.
- Work with patients **and** listen to the reasons they use to explain their difficulties; this can help to agree on a treatment plan that fits into their everyday lives.
- Explain that lifelong changes take time; using positive feedback is important to keep patients motivated.
- Be reasonable – changing everything in one go is impossible; break down the changes into smaller steps with realistic goals, so that patients can see their own success.
- Avoid giving **mixed messages** or contradictory advice, as this leads to confusion **and** patients feel there is little point in changing behaviour, as the 'experts' cannot agree on what is best. This means staff must work as a team, **and** ensure good communication across the professions involved in patient care.
- Make sure patients really understand what you have advised them to do: it can help to ask patients to report back to you what they understand has been agreed.

Norris et al. (2001) reviewed the effectiveness of management training in type 2 diabetes **and** found evidence to support an improvement in patients' knowledge **and** self-care skills, but this did not necessarily lead to an improvement in glycaemia control or cardiovascular risk factors. In 2010, Dorresteijn et al. published their updated systematic review on patient education for preventing diabetic foot ulceration, **and** concluded that there is insufficient robust evidence that simple patient education alone can lead to a clinically relevant reduction in ulcer **and** amputation incidence. This conclusion may reflect the **complex and** multidimensional nature of patient empowerment that may be needed for sustained behaviour change.

Healthcare systems also need to consider the ways in which self-management can be built into a framework of care, particularly knowing the projected increase in the elderly population (Bloom et al., 2011), many of whom will present with wound problems, **and** the anticipated worldwide increase in diabetes (**and** associated complications) (Mainour et al., 2007; Lauterbach et al., 2010). These

HOW:

- Explore the concept of co-design in the care of complex wounds in the multidisciplinary care setting.
- To improve the Health Care Delivery in the outpatient setting of complex chronic wounds.
- Respond to the complex changing needs of patients with multiple points of entry to the system.

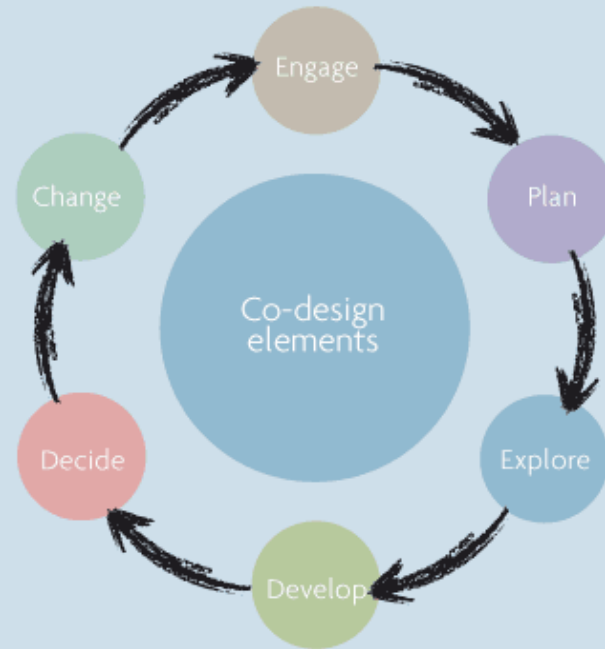
CO-DESIGN IN HEALTHCARE QUALITY IMPROVEMENT

- Encourages patients to have an equal role in the review and development of services.
- Designs services around patient experiences.
- Uses services and tools such as experience based surveys and workshops to develop a service that grows and expands to meet the needs of the patient

SIX ELEMENTS OF CO-DESIGN

Co-design is a way of improving healthcare services with patients.

Many service improvement projects have patient involvement but co-design focuses on understanding and improving patients' experiences of services as well as the services themselves.



ENGAGE THE TEAM (INCLUDING PATIENT)

- Patients are encouraged to proactively become engaged in their care and invited to provide feedback how this could be meet for them.
- Health professionals are given the opportunity to share their experiences and areas they felt could be improved in informal meetings.
- Ideas are shared and care plans developed.

FOUR KEY PRINCIPLES FOR SUCCESS:

1. Prioritise the patient experience
2. Trust the process
3. The 'means' is as important as the 'ends'
4. Acknowledge the patients' contributions throughout the process



CASE STUDY ONE

Wounds + New

- A** Right Lateral Malleolus; Original Injury 28.8.14
- B** Right Toe, Big, Medial
- Right Foot

Visits + New

- 26-01-2015 10:23:15
- 16-01-2015 14:26:04
- 17-12-2014 10:19:56
- 14-11-2014 13:57:19
- 07-11-2014 13:47:29
- 24-10-2014 14:32:29
- 17-10-2014 13:22:50
- 10-10-2014 14:03:44
- 26-09-2014 13:59:44
- 19-09-2014 13:34:08**

← Patients



Area: 3.2cm² Perimeter: 62mm Max Depth: 1mm Mean Depth: 0mm Volume: 0.0cm³
Captured: 19-09-2014 13:36:08

Wound Measurement
Date: 19-09-2014
Time: 13:36
Area: 3.2cm²
Perimeter: 62mm
Max Depth: 1mm
Mean Depth: 0mm
Volume: 0.0cm³

Report



+ Notes

📷 Capture Images

MULTIDISCIPLINARY ROLES:

- Gain diabetic control sugars were erratic as a result of infection Diabetic CNS helped to manage insulin levels and dietary changes.
- Vascular status was initially assessed and regularly tested
- Orthotics helped with off loading options initially wore darco shoe then moon boot
- Podiatry provided offloading at the wound site and general foot care
- Orthopaedics reviewed to ensure structural changes were not required
- Wound care provided by RN/ CNS

HE

Wounds + New

- A** Right Lateral Malleolus; Original Injury 28.8.14
- B** Right Toe, Big; Medial
- Right Foot.

Visits + New

- 30-01-2015 13:47:27
- 26-01-2015 10:23:15
- 16-01-2015 14:26:04
- 17-12-2014 10:19:56
- 14-11-2014 13:57:19
- 07-11-2014 13:47:29
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- 10-10-2014 14:03:44
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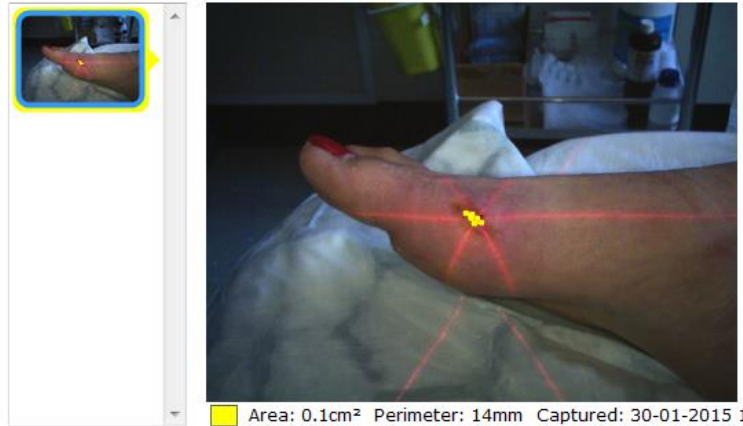
← Patients



Wound Measurement
Date: 30-01-2015
Time: 13:47
Area: 0.1cm²
Perimeter: 14mm
Max Depth: -
Mean Depth: -
Volume: -

Report + +

+ Notes



Area: 0.1cm² Perimeter: 14mm Captured: 30-01-2015 13:47:42

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Capture Images

CASE STUDY TWO

- Patient is a 32 year old dairy farmer
- 4 year history of diabetes now on insulin poorly controlled.
- Orthopaedic problems including:

Rupture of his right achilles tendon

Significant foot ulcers left foot

Flexion deformity of his right great toe

MULTIPLE PROBLEMS

FLEXION DEFORMITY



EQUINUS DEFORMITY



CHALLENGES TO HEALING

- Economic pressures faced by patient to provide for his family.
- Type of work; physical outside exposed to many pathogens (yeah right!)
- Reluctance to use offloading options.
- Distance from hospital (3 hour round trip).
- Education and understanding of severity of situation.

MULTIDISCIPLINARY ROLES:

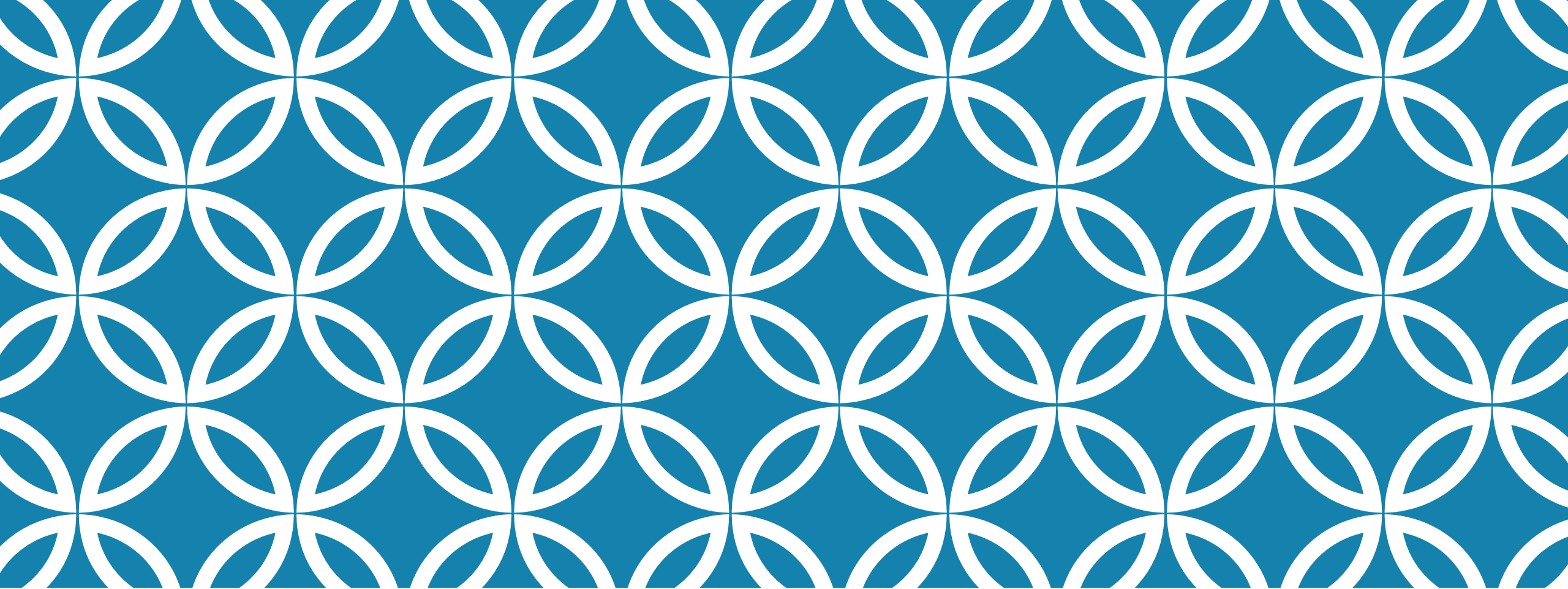
- Gain diabetic control sugars were erratic as a result of infection Diabetic CNS helped to manage insulin levels and dietary changes.
- Vascular status was initially assessed and regularly tested
- Orthotics helped with off loading options initially wore darco shoe then moon boot then 6 week treatment with total contact casting
- Podiatry provided offloading at the wound site and general foot care
- Orthopaedics performed debridement of left foot plantar ulcer and excision of 2nd metatarsal head.
- Wound care provided by RN/ CNS

Did it fit the lifestyle?



WHAT HAVE WE LEARNT SO FAR?

- Team work is everything
- Communication between all involved
- Learning from each other
- Constant peer review
- The surface is often tip of the iceberg in complex DFU
- One stop shop
- Patients love it
- Direct referral
- Increased profile throughout district
- Other colleagues know who to refer too



QUESTIONS?

