The Link Newsletter

pathogen · transmission · source · entry · host

Breaking The Chain of Infection

Cutimed®

3rd Quarter 2023
Compiled by Helen Loudon
Independent IPP and Wound Management Educator

CLICK HERE TO DOWNLOAD

Featured in this issue:

DIABETIC FOOT ULCERS (DFU)

An update on multidisciplinary management

Hello readers!

The Link Newsletter is published quarterly and aims to integrate the principles of infection prevention and control with good wound management practices and antimicrobial stewardship (AMS). Detailed references are available at the end of this article for you to access global consensus guidelines and in-depth practical guidance on this topic.

This edition follows on from the content in **The Link 2nd Quarter 2023 on 'Venous Stasis Ulcers'** – which covered the pathophysiology and consequences of chronic venous stasis. If you missed this issue, **click here** to review the important aspects of lower limb ulcer assessment, differential diagnosis, and the clinical management of venous leg ulcers (VLUs).

Introduction:

Diabetes mellitus (DM) is a clinical syndrome associated with a deficiency of insulin secretion or action. It is considered one of the largest emerging threats to health in the 21st century, and it is estimated that there will be **380 million people with DM by 2025.** [1]

A diabetic foot ulcer (DFU) is one of the most significant and devastating complications of diabetes and **is defined as '*a foot affected by ulceration that is associated with neuropathy and/or peripheral arterial disease (ischaemia) of the lower limb in a patient with diabetes*'.** [2-4]

DFUs are complex, chronic wounds, which have a major long-term impact on the morbidity, mortality and quality of patients' lives. **Most amputations begin with foot ulceration but can be prevented with good foot care and screening to assess the risk of complications. Infection is also commonplace, occurring in up to 25% of patients, and is costly.** [5]

Key words: *pathophysiology, hyperglycaemia, peripheral neuropathy, callus, ABPI, peripheral arterial disease (PAD), intermittent claudication, infection, osteomyelitis, off-loading, amputation.*

The prevalence of diabetic foot ulceration in the diabetic population is 4–10% and the condition is more frequent in older patients. A population-based cohort study [6] demonstrated that **the development of a DFU is associated with a 5% mortality in the first 12 months and a 42% mortality within 5 years.** Patients with DFUs were also found to have a 2.5-fold increased risk of premature death (e.g., from myocardial infarction or stroke) compared to their diabetic counterparts without foot wounds. Furthermore, patients living with DFUs suffer greater morbidity, lower health-related quality of life and poorer psychosocial adjustment, and have a high burden of healthcare interactions. [3, 5-7]

PATHOGENESIS – WHY ARE DIABETICS PRONE TO FOOT ULCERATION? [3-8]

Diabetic foot ulcers are amongst the most common complications for patients who have poorly controlled diabetes mellitus. **The aetiology of diabetic foot ulcers is multifactorial** – the most significant risk factors are **poor glycaemic control, peripheral arterial disease and diabetic neuropathy** – a common feature in almost 90% of DFUs, which affects the motor, sensory and autonomic nerve fibres. **This inevitably leads to repeated (but poorly recognised) foot trauma, often caused by improper foot care or ill-fitting footwear.**

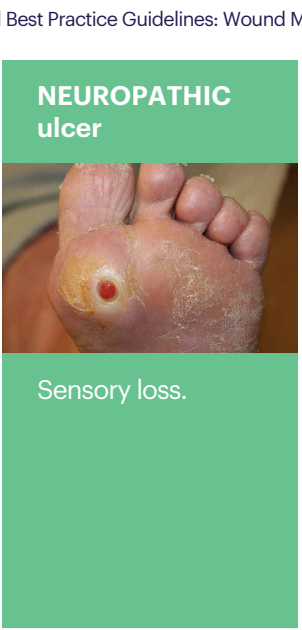
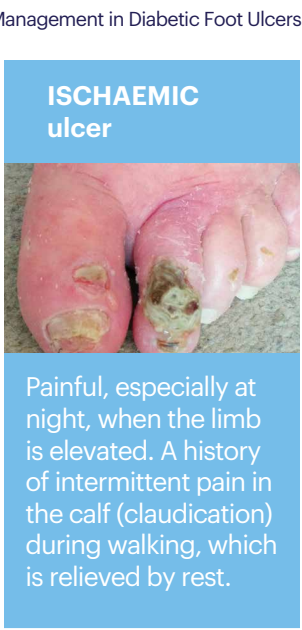
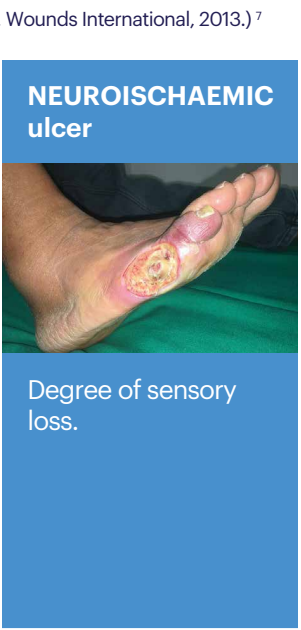
The development of a diabetic foot ulcer is usually in 3 stages:

1. The initial stage is the development of a **callus**, resulting from sensory neuropathy.
2. Motor neuropathy may cause a **physical deformity of the foot** (such as 'hammer toes' and 'claw foot'), **which results in abnormal pressures over bony prominences**. Sensory neuropathy causes sensory loss which leads to **ongoing trauma**.
3. **Drying of the skin** due to autonomic neuropathy is another contributing factor. **Frequent trauma of the callus results in subcutaneous haemorrhage, which eventually erodes and ulcerates**.

Ironically, diabetes-related visual impairment often prevents timeous recognition of injury or ulceration. There are several anecdotal stories describing how a diabetic with peripheral neuropathy was unaware of a foreign object either inside or penetrating the sole of their shoe and presented with advanced ulceration!

Table 1. **Typical features of Diabetic Foot Ulceration (DFU) according to aetiology**

(Adapted from International Best Practice Guidelines: Wound Management in Diabetic Foot Ulcers. Wounds International, 2013.) [7]

Feature	NEUROPATHIC ulcer	ISCHAEMIC ulcer	NEUROISCHAEMIC ulcer
Visual appearance			
Sensation	Sensory loss.	Painful, especially at night, when the limb is elevated. A history of intermittent pain in the calf (claudication) during walking, which is relieved by rest.	Degree of sensory loss.
Callus and/or necrosis	Callus often present.	Necrosis or gangrene is common.	Minimal callus formation. Prone to necrosis.
Typical location/s	Weight-bearing areas of the foot (e.g., metatarsal heads, the heel or over the dorsal surface of clawed toes).	Tips of the toes, nail edges or even between the toes. Lateral borders of the foot.	Margins of the foot and toes.
Wound bed	Pink, granulating, surrounded by callus.	Pale, sloughy, poor granulation. 'Punched-out' appearance, with little exudate.	Delayed healing, with poor granulation.
Foot temperature and pulses	Warm, pulses may be bounding.	Cool, poor, or absent pulses.	Cool, poor, or absent pulses.
Other	Associated with very dry skin and fissuring.	Delayed healing, with high risk of infection. The limb may appear to be shiny and hairless. Toenails are thickened and deformed.	High risk of infection. The affected limb may be cooler to the touch; however, the skin may also have an 'exuberant' pink appearance which is misleading.

The underlying cause(s) of a DFU will have a significant bearing on the clinical management and must be determined before a care plan is put into place. [7]

VASCULAR ASSESSMENT – Early detection of peripheral arterial disease (PAD)

People with diabetes are twice as likely to have PAD as those without diabetes. It is also a key risk factor for lower extremity amputation. The proportion of patients with an ischaemic component to their DFU is increasing and it is reported to be a contributory factor in the development of DFUs in up to 50% of patients. [7]

Measuring the ankle systolic blood pressure and calculating an ankle brachial pressure index (ABPI) is crucial to confirm peripheral arterial disease (PAD) in at-risk patients and trigger appropriate referral and treatment. [9]

The ABPI provides an objective measure of the patency of the large arteries supplying blood to the foot by comparing systolic pressures in the arm and leg. The ABPI should be assessed in all patients with lower limb ulceration prior to commencement of treatment and every three months thereafter.

Note:

- Incorrect patient positioning or using an inappropriate cuff size may cause inaccurate ABPI measurement.
- Measurement of the toe-brachial pressure index (TBPI) may be useful when obtaining an ABPI is not possible or too painful.

Table 2. **Interpretation of the ankle brachial pressure index (ABPI)**

(Adapted from Harding K, et al. Simplifying venous leg ulcer management. Consensus recommendations. Wounds International 2015.) [10]

ABPI*	Interpretation
>1.0 – 1.3mmHg	Normal – probably no peripheral arterial disease.
>1.3mmHg	Arterial calcification may be present. Measurement of the toe-brachial pressure index may be more useful.
0.81–1.00mmHg	Mild peripheral arterial occlusive disease. Repeat ABPI if necessary.
0.51 – 0.80mmHg	Moderate peripheral arterial occlusive disease.
<0.5mmHg ⚠	Severe peripheral arterial disease and ischaemia. Refer patient to a vascular surgeon for further investigations and possible revascularisation.

***ABPI values should be interpreted in the context of any signs and symptoms of peripheral arterial disease** (e.g., intermittent claudication or pain at rest). **If the ABPI is within normal range, but the patient has symptoms of PAD, they should be assumed to have peripheral arterial disease and be referred to a vascular clinic for further investigation and multidisciplinary management.** [10]

If PAD is diagnosed, it is important to emphasise to the patient that positive lifestyle changes may prevent further complications and surgical interventions. [9]

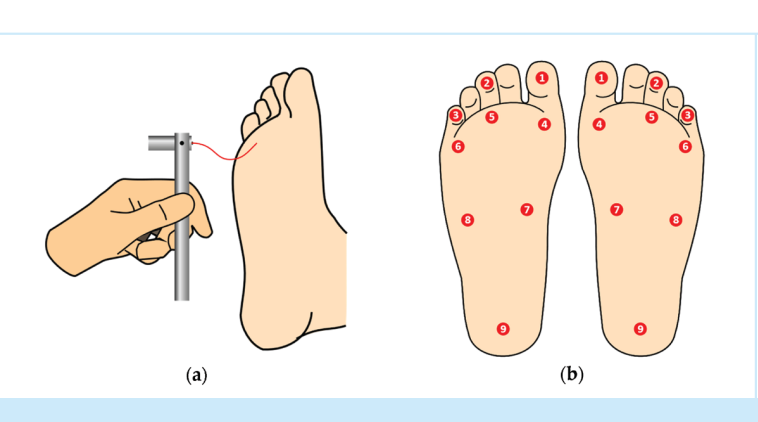
Relevant lifestyle and healthcare education includes:

- ✓ Nutrition and dietary advice
- ✓ Understanding of cholesterol control
- ✓ Exercise
- ✓ Stopping smoking

TESTING FOR LOSS OF SENSATION [4,7,11]

Two simple and effective tests for peripheral neuropathy are commonly used:

- **A standard 128Hz tuning fork**
- **10g (Semmes-Weinstein) monofilament**
  The 10g monofilament is the most frequently used screening tool to determine the presence of neuropathy in patients with diabetes. It should be applied at various sites along the plantar aspect (sole) of the foot. Guidelines vary in the number of sites advocated, but the international consensus is to test at three sites.



A positive result is the patient's inability to feel the monofilament when it is pressed against the foot with enough force to bend it.

Do not test for neuropathy over areas of callus as this will mask sensation from the testing devices and may give a false-positive result. [7,11]

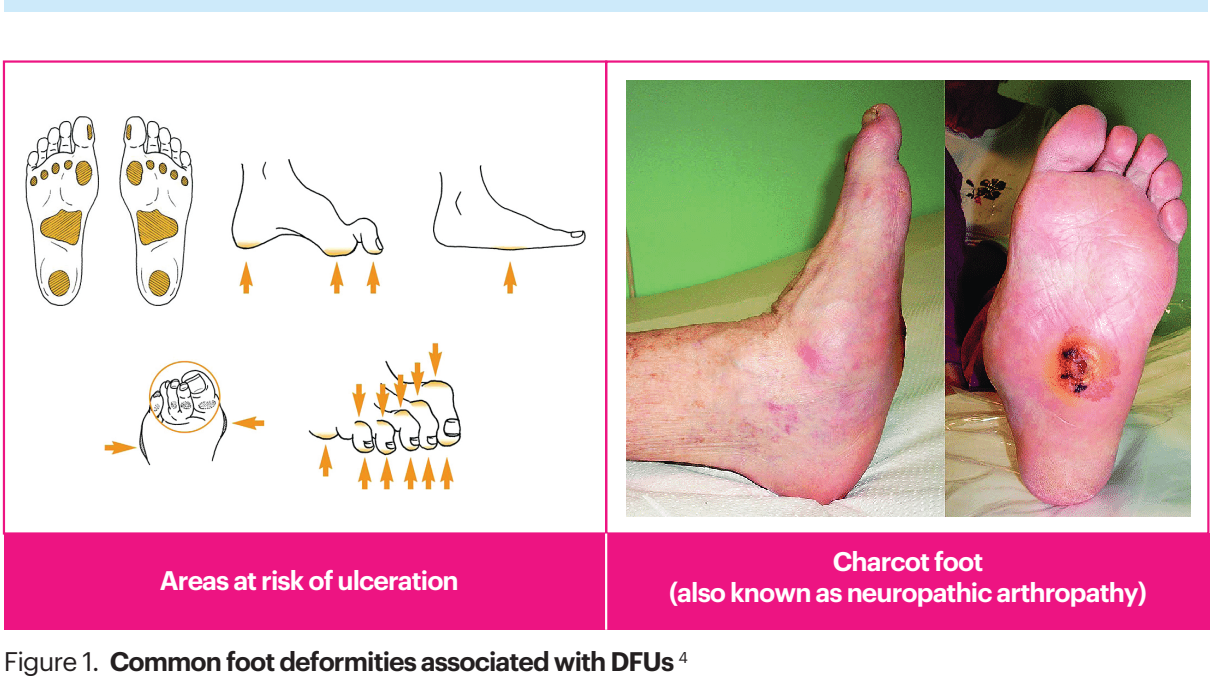

Areas at risk of ulceration
Charcot foot (also known as neuropathic arthropathy)

Figure 1. **Common foot deformities associated with DFUs** [4]

QUALITY
DEVELOP
BEST PRACTICE
SOLUTION
STRATEGY
SKILLS
SUCCESS

STANDARD OF CARE: DIABETIC FOOT ULCER MANAGEMENT [3-7,11,13-16]

The pillars of DFU management include the following:

- Multidisciplinary liaison
- Glycaemic control and lifestyle education
- Vascular assessment (and revascularisation where appropriate)
- Appropriate footwear and off-loading to prevent and/or heal existing DFUs
- Biofilm-based wound care and sharp debridement if appropriate (to minimise callus and non-viable tissue)
- The use of dressings which promote a moist healing environment, but control microbial bioburden
- Early identification and treatment of foot (and other) infections (including antimicrobial stewardship)

Multidisciplinary specialist care [4-7,11,15]
Where resources are available, referral of the patient to a multidisciplinary care centre is now the standard of care. Ideally, the DFU care team would comprise specialist surgeons (e.g., general, vascular, orthopaedic), a podiatrist, orthotist, physician, physical therapist, and a wound care nurse. Numerous studies and systematic reviews have shown positive effects in reducing wound healing times, amputation rates and the severity of amputation.

The role of the podiatrist [4,12,13]
There are 5 key elements that underpin prevention of foot problems:

- Identification of the at-risk foot
- Regular inspection and examination of the feet
- Education of patient, family and healthcare providers
- Recommendations for appropriate footwear
- Treatment and referral for pre-ulcerative signs

Not all diabetic foot problems can be prevented or healed, and at times major amputations are unavoidable. **However, in most cases, a better outcome can be achieved if patients gain early sustained access to dedicated and experienced podiatrists for assessment, skilled callus debridement, biomechanical and gait analysis, off-loading and footwear advice, and footcare education.**

Table 3. **Basic diabetic foot care advice** [7,11-13]

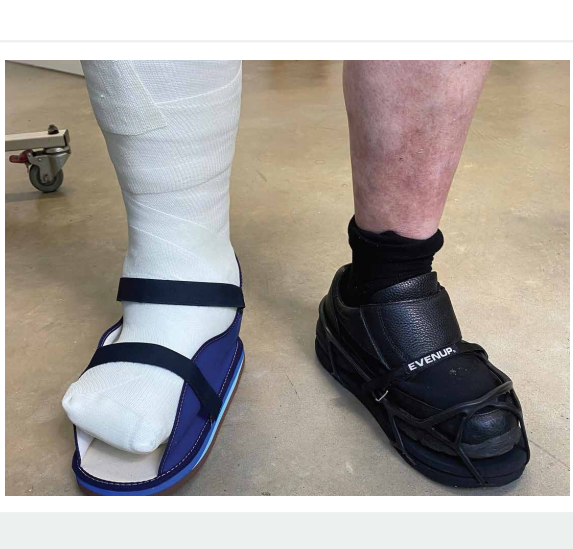
✓ DO's	✗ DON'Ts
Wash feet daily, drying carefully in between the toes.	Avoid walking barefoot in or outdoors and wearing shoes without socks.
Inspect your feet daily, including between the toes (or ask a family member or carer if your vision is poor).	Don't wear open sandals – stones and foreign bodies can easily cause trauma.
Examine your shoes and socks every day for foreign bodies such as stones, thorns, nails, etc.	Don't use chemical agents or plasters to remove corns and/or calluses.
Change your stockings / socks daily and beware of the seams.	Don't darn stockings / socks with ladders or holes – the thickened area will cause pressure and trauma.
Use a good quality moisturiser on your feet and heels (e.g., with 5-10% urea), but avoid the areas in between your toes.	Don't place your feet near a heater or hot surface. Always test the temperature of bath water beforehand.
Clip your nails straight across and file away any sharp edges.	Do not treat your own feet (e.g., nails, corns and calluses) if your vision is poor.
Consider having a foot scan to detect areas of high pressure over bony prominences.	Avoid beauty salon pedicures, to prevent injury and fungal skin and nail infections.

Pressure off-loading
Off-loading of the ulcer area is extremely important for the healing of plantar ulcers!

- The most effective method of off-loading is the **non-removable total contact cast (TCC)**, indicated for the effective off-loading of diabetic ulcers located at the forefoot or midfoot. Non-removable TCCs are made of plaster or fast setting fibreglass cast materials, and work by distributing the plantar pressures from the forefoot and midfoot to the heel. They allow complete rest of the foot whilst also permitting restricted activity. The application of a TCC is also indicated for the treatment and management of acute **Charcot foot** in order to stabilise the structural deformity, with or without plantar ulceration [14], while non-removable TCCs also help to reduce oedema and improve patient compliance to treatment. [3,12,14]

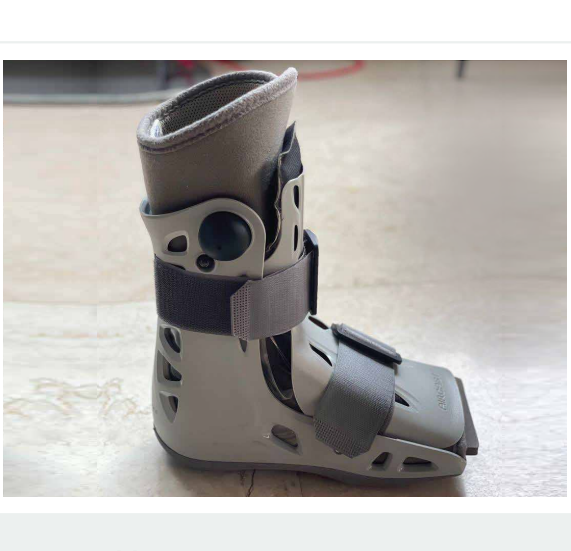
Watch this short video on the practical application of a total contact cast (TCC):
https://www.youtube.com/watch?v=u7BZN7OS1zU

- There are also a variety of **removable cast walkers (RCWs)**, which have a lightweight, semi-rigid shell and rocker-type sole which helps to support the limb, while off-loading the forefoot during standing and walking. The foot base is wide, permitting space for dressings. Some RCWs have overlapping inflatable air cells which provide intermittent pneumatic compression for oedema reduction. [3,7]



Non-removable total contact cast (TCC)

Severe foot ischaemia, a deep abscess, osteomyelitis and poor skin quality are absolute contraindications to the use of a non-removable TCC. [3,14]



Removable contact cast
(also referred to as a 'moon boot' or 'air-walker')

Local wound care of the DFU [1,15,16]

- **Debridement** should be carried out in all chronic wounds to remove surface debris and necrotic tissue (also referred to as 'wound bed preparation'). Debridement improves healing by promoting the production of granulation tissue and can be achieved surgically, enzymatically, biologically or through autolysis.

  Surgical or 'sharp' debridement should be performed by a surgeon or experienced podiatrist using a scalpel and is a rapid and effective method for removing calluses and necrotic tissue (all nonviable tissue is removed until a healthy bleeding ulcer bed is produced with saucerisation of the wound edges).

If severe ischaemia is suspected, aggressive debridement should be postponed until a vascular examination has been carried out and, if necessary, a revascularisation procedure performed. [3]
Sharp debridement is outside the Scope of Nursing Practice in South Africa. [17]

- **Dressings:** No single dressing is ideal for all DFUs; however, the goal should be to create a moist environment that promotes granulation, autolytic processes, angiogenesis and improved migration of epidermal cells across the wound bed. The selected dressing should also be appropriate to manage excess wound exudate if necessary. Non-adherent products which support a moist wound healing environment are ideal (e.g., hydrogels, alginates, foams, moistened hydrofibers and hydrocolloids), especially since non-infected DFUs tend to lack exudate.

  Footbaths are contraindicated as they will induce maceration of the skin and wound tissue, promoting fungal colonisation and infection. [4,7,11]

Antimicrobial Stewardship (AMS)
Do not treat clinically uninfected foot ulcers with systemic or local antibiotic therapy with the goal of reducing the risk of infection or promoting ulcer healing. [15,18]

Use topical DACC bacteria-binding and antimicrobial antiseptic (not antibiotic) agents to manage ischaemic DFUs, and those exhibiting signs and symptoms of **local wound infection** and **biofilm** activity. [5,15,16,18-20]
For example:

- Hypochlorous acid cleansing solutions and gels to disrupt biofilm structures
- DACC dressings which reduce microbial bioburden through physical binding
- PHMB solutions, gels or impregnated dressings
- Cadexomer iodine beads or impregnated dressings
- Medical grade Manuka honey ointments or impregnated dressings
- Silver-containing and -releasing dressings – where possible, reserve as a last line therapy (AMS) to preserve silver efficacy for severe infections

Where facilities exist, **negative pressure wound therapy (NPWT)** reduces the frequency of dressing changes, keeps anatomically challenging wounds clean and reduces odour. It is thought that the vacuum forces increase perfusion and stimulate granulation, remove inflammatory and infectious material, and approximate the wound edges.

A recent systematic review analysing 11 randomised controlled trials (RCTs) comparing NPWT with standard dressing changes showed that NPWT had a higher rate of complete healing, shorter healing time, and resulted in fewer amputations. [5,6]

- **Adjuvant therapies:** [6]
  Human growth factors have been studied for adjunct use in the management of DFUs, including fibroblast growth factors, epidermal growth factors, vascular endothelial growth factors, granulocyte colony-stimulating factors and platelet-derived growth factors.
  Acellular dermal matrix has been used for several years for wound healing, tissue repair and reconstruction. The extracellular matrix (ECM) provides structural support for host cell repopulation, modulates cellular responses, and promotes vascularisation and a moist wound environment, which increases cell regeneration.
  Electrical stimulation, electromagnetic and laser therapies are believed to aid in wound healing by promoting angiogenesis, fibroblast proliferation, collagen synthesis and migration keratinocytes.

BE ANTIBIOTICS AWARE
SMART USE, BEST CARE

DIABETIC FOOT INFECTION (DFI)

The presence of limb ischaemia increases the risk of an ulcer becoming necrotic or infected; however, foot infection should not be defined using the results of wound cultures alone! The presence of high numbers of bacteria on culture (usually defined as ≥10^5 colony-forming units/gram of tissue) is advocated as a basis for differentiating infected from uninfected DFUs; however, the data (from conventional laboratory culture or molecular methods) is varied and controversial. [15]

DFI is better defined clinically as 'the presence of manifestations of an inflammatory process in any tissue below the malleoli in a person with diabetes mellitus'. [15]

Signs and symptoms of inflammation may, however, be masked by the presence of peripheral neuropathy, peripheral artery disease or immune dysfunction. [15]

The 'probe-to-bone test', C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and procalcitonin may be useful as adjunctive measures for confirming the diagnosis.

Antibiotics should be prescribed using local microbial surveillance data and stewardship guidelines. Empiric antibiotic therapy should cover Gram-positive pathogens such as *Staphylococcus aureus* and *beta-haemolytic Streptococci*, commonly isolated Gram-negative pathogens (e.g., *Pseudomonas aeruginosa*), and obligate anaerobes in cases of moderate to severe diabetic foot infections. [15]

Osteomyelitis – AMS and principles of management
Infection in bone typically develops by contiguous spread from overlying soft tissue and is more difficult to eradicate than soft tissue infection. Surgical removal of infected and necrotic bone is usually recommended, with a specimen submitted for laboratory culture to determine the causative pathogen/s. Initial antibiotic therapy for osteomyelitis should be administered intravenously, before switching to the oral route. Suitable agents include penicillins, cephalosporins, carbapenems, metronidazole (in combination with other antibiotic/s), clindamycin, linezolid, daptomycin, fluoroquinolones or vancomycin. **Guidance from a clinical microbiologist or infectious diseases specialist is strongly recommended.** [15,20]

There is no such thing as a trivial lesion of the diabetic foot!
The reader is directed to the references section below, where several useful assessment tools, grading systems and evidence-based DFU guidelines are available and regularly updated. [4-7,11,15]

Need product or newsletter information?
Click here and an Essity representative will contact you

REFERENCES

1. Casqueiro J, Casqueiro J, Alves C. Infections in patients with diabetes mellitus: A review of pathogenesis. *Indian Journal of Endocrinology and Metabolism* 2012; Vol 16: Supplement 1.
2. Van Netten J, Bus SA, Apelqvist J, Lipsky BA, Hinchliffe RJ, Game F, Rayman G, Schaper NC . Definitions and criteria for Diabetic Foot Disease. International Working Group on the Diabetic Foot (IWGDF) 2019.
3. Alexiadou K, Doupis J. Management of diabetic foot ulcers. *Diabetes Ther*. 2012 Nov;3(1):4. doi: 10.1007/s13300-012-0004-9. Epub 2012 Apr 20. PMID: 22529027; PMCID: PMC3508111.
4. Schaper NC, Van Netten JJ, Apelqvist J, Lipsky BA, Bakker K, on behalf of the International Working Group on the Diabetic Foot (IWGDF). Prevention and management of foot problems in diabetes: a Summary Guidance for Daily Practice 2015, based on the IWGDF Guidance Documents.
5. Chadwick P, Ousey K. Bacterial-binding dressings in the management of wound healing and infection prevention: a narrative review. *Journal of wound care*. 2019 Jun 2;28(6):370-382. doi: 10.12968/jowc.2019.28.6.370
6. Everett E, Mathioudakis N. Update on management of diabetic foot ulcers. *Ann N Y Acad Sci*. 2018 Jan;1411(1):153-165. doi: 10.1111/nyas.13569. PMID: 29377202; PMCID: PMC5793889.
7. International Best Practice Guidelines: Expert Working Group. Wound Management in Diabetic Foot Ulcers. *Wounds International*, 2013.
8. Ekmektzoglou KA, Zografos GC. A concomitant review of the effects of diabetes mellitus and hypothyroidism in wound healing. *World J Gastroenterol*. 2006 May 7;12(17):2721-9. doi: 10.3748/wjg.v12.i17.2721. PMID: 16718759; PMCID: PMC4130981.
9. Wounds UK. Best Practice Statement: Ankle brachial pressure index (ABPI) in practice. London: *Wounds UK*, 2019.
10. Harding K, et al. Simplifying venous leg ulcer management. Consensus recommendations. *Wounds International* 2015.
11. Society for Endocrinology, Metabolism and Diabetes of South Africa https://www.semdsa.org.za/for-members/guidelines
12. Clarke A, Tsubane M. The role of the podiatrist in managing the diabetic foot ulcer. *Wound Healing Southern Africa* 2008;1(1):40-42.
13. Thompson, A. An Insight into the Education of Patients with Diabetes by Podiatrists. *South African Journal of Diabetes August* 2012.
14. Naude L. Total Contact Casting: a case study. *Wound Healing Southern Africa* 2014;7(2):56-60.
15. Lipsky BA, Senneville É, Abbas ZG, Aragón-Sánchez J, Diggle M, Embil JM, Kono S, Lavery LA, Malone M, van Asten SA, Urbančič-Rovan V, Peters EJG; International Working Group on the Diabetic Foot (IWGDF). Guidelines on the diagnosis and treatment of foot infection in persons with diabetes (IWGDF 2019 Update). Guidelines on the diagnosis and treatment of foot infection in persons with diabetes. *Diabetes Metab Res Rev*. 2020 Mar;36 Suppl 1:e3280. doi: 10.1002/dmrr.3280. PMID: 32176444.
16. International Wound Infection Institute (IWII). Wound Infection in Clinical Practice. *Wounds International. 2022.*
17. The SA Department of Health. The Nursing Act, 2005 (Act No. 33 as amended) Regulations regarding the Scope of Practice for Nurses and Midwives.
18. Probst S, Apelqvist J, Bjarnsholt T, Lipsky BA, Ousey K, Peters EJG. Antimicrobials and Non-healing Wounds: An Update. *J Wound Management*, 2022;23(3 Sup1):S1-S33. DOI:10.35279/jowm2022.23.03.sup01
19. Ousey K, Rippon MG, Rogers A. (2021) Clinical and laboratory Evidence aligning DACC-coated Wound Dressings with Antimicrobial Stewardship: A White Paper.
20. Lipsky, B.A., Dryden, M., Gottrup, F., Nathwani, D. et al (2016). Antimicrobial stewardship in wound care: A Position Paper from the British Society for Antimicrobial Chemotherapy and European Wound Management Association. *J Antimicrob Chemother* 2016; 71: 3026–3035.

essity 23_BSN095
Cutimed® is a registered trademark of BSN medical GmbH. / Sorbact® is a registered trademark of ABIGO Medical AB.
Name and business address: BSN Medical PTY (LTD) an Essity Company. Co. Reg. No. 2001/003941/07. 30 Gillitts Road, Pinetown 3610. Tel. No. +27 31 010 0522. Customer Specific Enquiries: +27 31 710 8038/8005. Email: medical.za@essity.com, www.essity.com. Further information available on request from Essity. 23_BSN095

ADVANCED WOUNDCARE TRAINING
Education • Management • Treatment
CPD ACCREDITED COURSES
Further your knowledge in advanced wound care
CLICK HERE TO REGISTER
essity

Stand together
against antimicrobial resistance

#wound_warriors

Sorbact® Technology dressings can form a valuable part of your Antimicrobial Stewardship strategy[1]

Antimicrobial resistance is a heavy burden and optimal wound management is key in fighting it. Dedicated to improving wellbeing through leading hygiene and health solutions, Essity supports the Antimicrobial Stewardship initiative.

- Sorbact® Technology dressings reduce the bioburden in wounds[2]
- Effective against the WHO's top 5 pathogens, as shown in-vitro[3]
- Using Cutimed® Sorbact® for acute and hard-to-heal wounds supports Antimicrobial Stewardship (AMS)[1] as part of a multi-modal approach, in line with the Best Practice Statement for AMS Strategies[4]

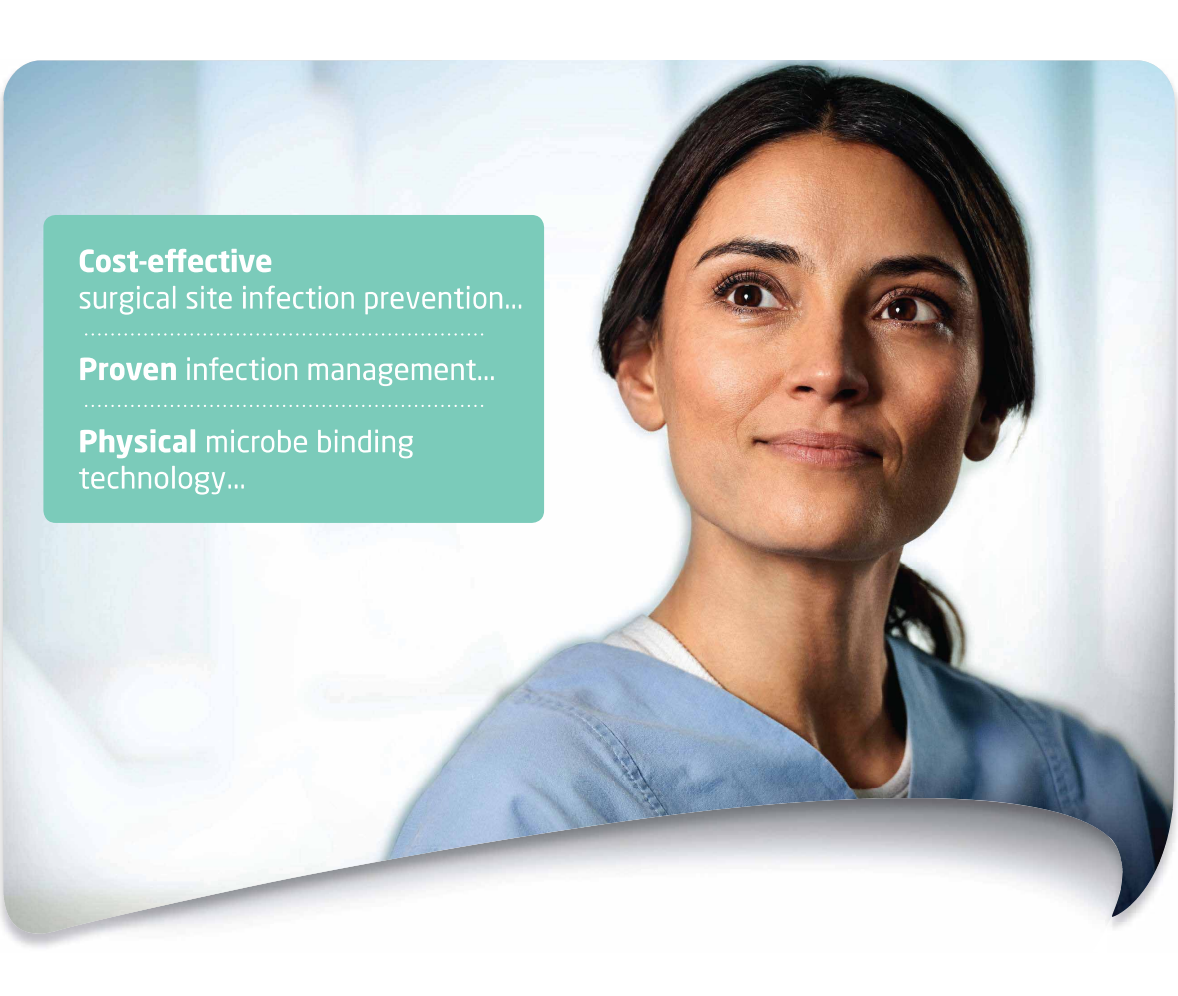
Prevent and manage infected wounds with the unique Sorbact® Technology.

Average bacterial load reduction -73.1% [5]

www.woundwarriors.co.za

Cutimed is a registered trademark of Essity. Sorbact is a registered trademark of ABIGO Medical AB.

essity Cutimed®, an Essity brand
Name and business address: BSN MEDICAL PTY (LTD) an Essity Company. Co. Reg. No. 2001/003941/07. 30 Gillitts Road, Pinetown, 3610. Tel. No. +27 31 710 8111. Email: medical.za@essity.com. www.essity.com. Further information available on request from Essity. 22_BSN104.
Leukoplast® Cutimed®



Cost-effective surgical site infection prevention...
Proven infection management...
Physical microbe binding technology...

Leukomed® Sorbact®
Surgical site infection prevention

- Clinically significant 65% relative risk reduction of acquiring a surgical site infection post caesarean section[1]
- Up to 57% cost reduction of SSI when treating caesarean sections, using NHS cost model[2]
- Effective reduction of the bacterial burden in critically colonised or locally infected wounds[3]

Essity. 30 Gillitts Road, Pinetown 3610. Phone: +27 31 710 8111. Email: medical.za@essity.com. www.medical.essity.co.za

essity Leukoplast®, an Essity brand
Leukomed® by Leukoplast®

JOBST

Durable
- JOBST® Relief® is remarkably durable. The high tenacity double covered inlay and air textured knitting yarns, combined with the reinforced heel and toe, deliver lasting support and ensure the product's longevity.

Comfortable
- Specially enhanced yarns combined with 3D knit design result in a skin friendly, air-permeable fabric.
- JOBST® Relief® feels just as comfortable at the end of the day as when you first put the stockings on.

Easy to don
- The covered inlay yarns and the 3-dimensional knit structure ensure easy application.

Medical graduated compression
- Available in three compression classes for the management of venous conditions.

Compression classes
15-20 mmHg* CEAP Stages C0-C1
20-30 mmHg* CEAP Stages C2-C3
30-40 mmHg* CEAP Stages C3-C6

JOBST® Relief®
Medical stockings for the management of mild to severe venous indications requiring gradient compression.

essity JOBST®, an Essity brand
Name and business address: BSN Medical PTY (LTD) an Essity Company. Co. Reg. No. 2001/003941/07. 30 Gillitts Road, Pinetown 3610. Tel. No. +27 31 0100 522. Email: medical.za@essity.com, www.essity.com. Further information available on request from Essity. 23_BSN081

JOBST
Complete Decongestive Therapy (CDT) is considered the 'gold standard'

Complete Decongestive Therapy (CDT) is considered the 'gold standard' of lymphoedema treatment, and consists of an initial reductive phase, followed by a maintenance phase.

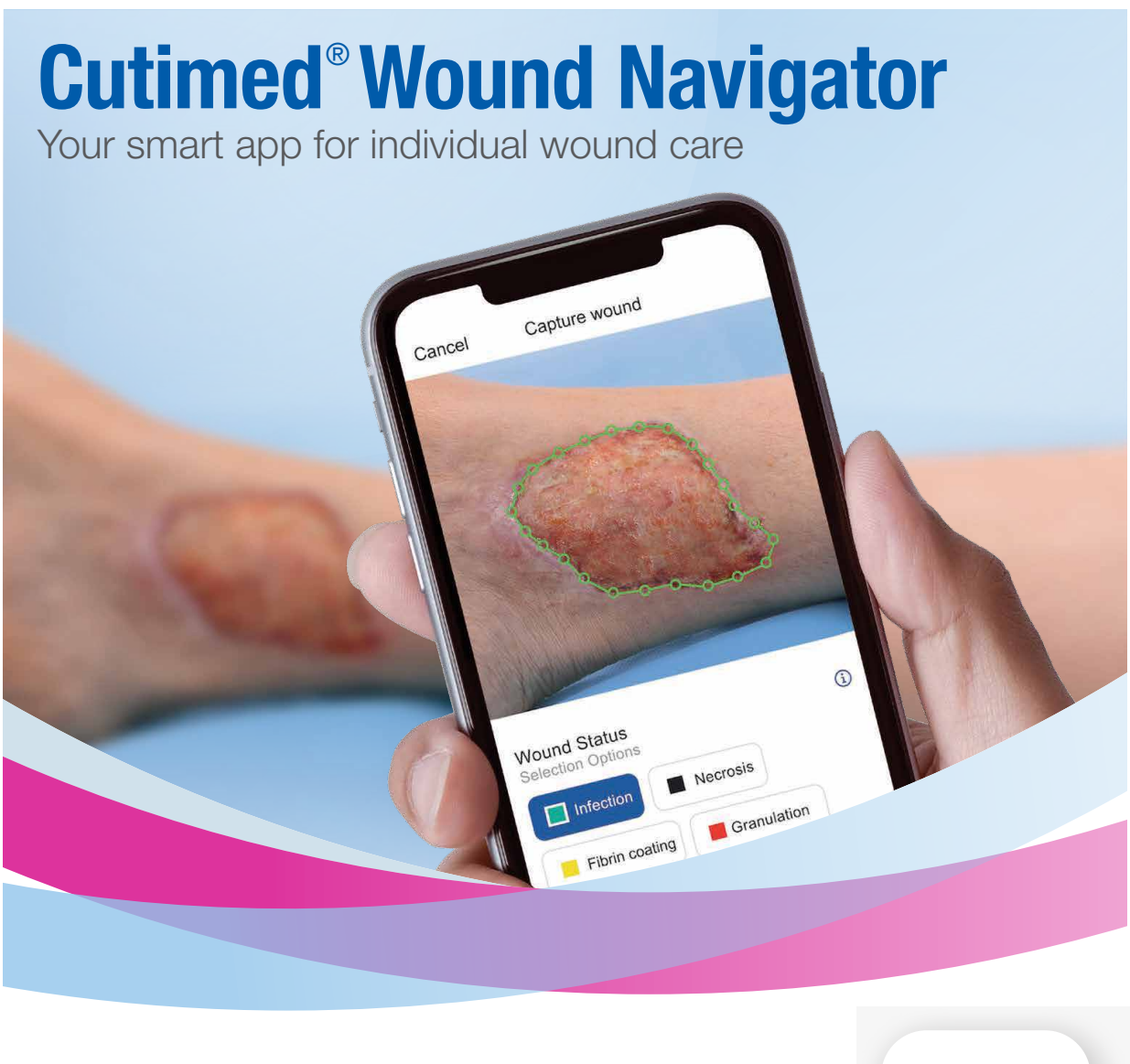
Phase 1 of CDT is compression therapy that aims to reduce your swelling as much as possible, using multilayer short-stretch bandages or wraps.

Comprifore - 4-layer bandage system	Compri 2 - 2-layer bandage system	Comprilan - Short-stretch bandage
Bandages are designed to sustain compression up to 7 days	Wearing interval up to 7 days	Promotes venous (blood) return
Delivers high stiffness factor to provide effective compression	Helps prevent development of oedema	Washable and reusable up to 10 times
Four-layer system designed for easy application	Allows easy and quick application	High working pressure, low resting pressure

For more information and where to buy, visit: JOBST.co.za

essity JOBST®, an Essity brand
Name and business address: BSN Medical PTY (LTD) an Essity Company. Co. Reg. No. 2001/003941/07. 30 Gillitts Road, Pinetown, 3610. Tel. No. +27 31 010 0522. Customer Specific Enquiries: +27 31 710 8038/8005. Email: medical.za@essity.com, www.essity.com. Further information available on request from Essity. 23_BSN057.

Cutimed® Wound Navigator
Your smart app for individual wound care



Scan here to download the free app to your smartphone or tablet!
- Determine the wound size with the interactive app
- Selection of suitable wound care products
- Direct access to all Cutimed® product information and exchange product selection with professional partners

Cutimed® WOUND NAVIGATOR

essity Cutimed®, an Essity brand
Essity. 30 Gillitts Road, Pinetown 3610. Phone: +27 (0)31 0100 522
Email: medical.za@essity.com. www.medical.essity.co.za
Customer Service: +27 (0)31 710 8038/ (0)31 710 8005
Further information available on request from Essity.

Cutimed®

Cutimed® Wound Navigator only saves data in the app. We do not receive any data from you or your patients and have no access to them.