

FACEBOOK LIVE

MAY
28

TRANSFORMING WOUND CARE: SIMPLIFYING INFECTION MANAGEMENT



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Learning objectives

- Understanding the need to transform wound infection and biofilm management
- Back to basics – wound infection and biofilm
- A simple solution in the management of challenges associated with wound infection
- Sharing best practice
- Partnership working

Why is effective infection management important?



'The pain was an 8 in the beginning. Now it's not more than 2 or 3.'



Carlos, wound patient

Current challenges in wound care



- Demographics
- Wound prevalence
- Funding and staffing
 - Covid-19

Community nurses: 14% since 2009¹

District nurses: 45% since 2009¹

**Unhealed wounds double
community nurse visits²**

Relevance of wound infection

In the event of an infection:

- Wound healing is delayed³
- Patient quality of life can be adversely impacted^{4,5,6}
- Treatment costs rise^{4,6}
- Wound management practices become more resource demanding⁴



With a holistic approach, proper assessment and early intervention, many problems can be avoided and clinical outcomes improved.^{4,3}



Who is at risk of wound infection?

Development of wound infection is multifactorial and occurs when the cumulative risk factors overwhelm the host's defence system.³

**Patient
factors**

**Environmental
factors**

Wound characteristics that predispose to infection³

Acute wounds

- Contaminated or dirty wounds
- Operative procedure
- Trauma with delayed treatment
- Pre-existing infection
- Spillage from gastrointestinal tract
- Inappropriate hair removal

Both types of wounds

- Necrotic tissue or foreign body
- Impaired tissue perfusion
- Haematoma
- Increased exudate or moisture

Chronic wounds

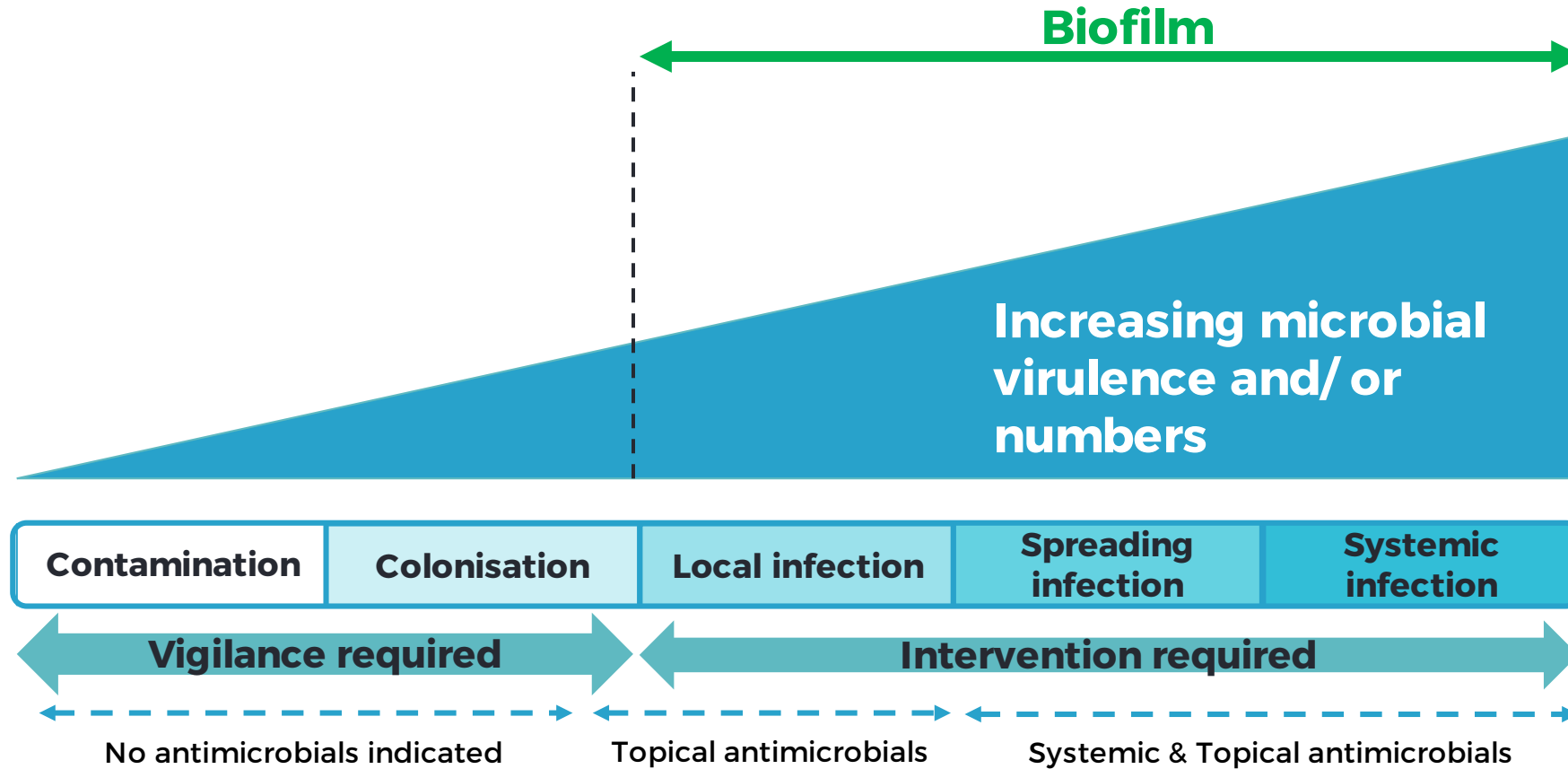
- Degree of chronicity
- Large size and/or depth
- Anatomically near site of potential contamination (e.g. anal area)



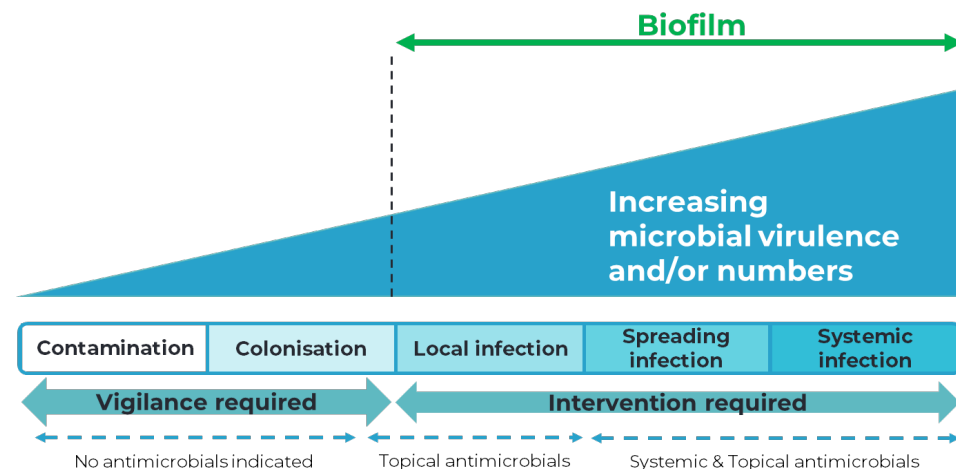
USING BEST PRACTICE TO IDENTIFY WOUND INFECTION AND BIOFILM

Let's get back to basics

Stages of wound infection³



Local infection³



Copyright of Sylvie Meaume

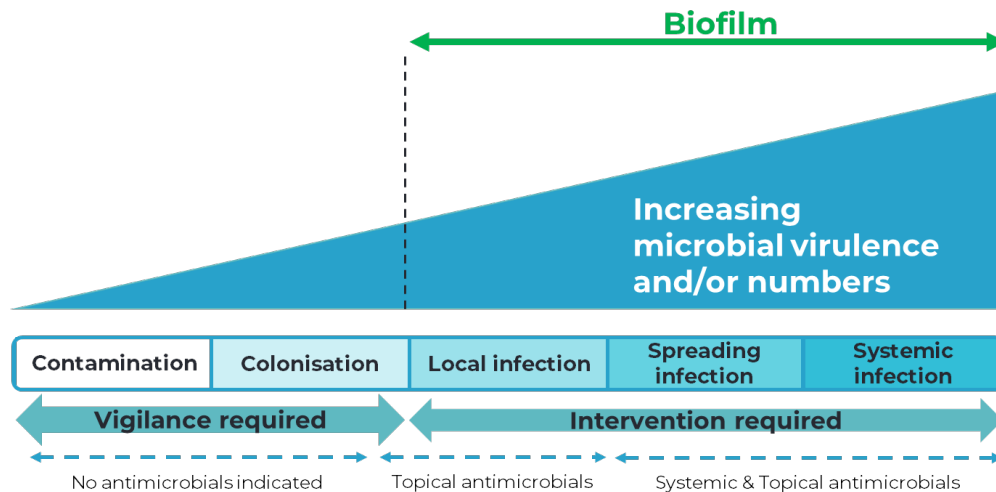
Overt symptoms

- Erythema/redness
- Localised heat
- Swelling
- Purulent discharge
- Delayed healing
- New or increasing pain and malodour

Covert symptoms

- Hyper-granulation
- Friable tissue
- Epithelial bridging/ pocketing
- Wound breakdown
- Delayed healing
- New or increasing malodour and pain

Spreading infection³



- The patient will show covert as well as overt symptoms
- May also demonstrate early systemic infection indicators



Copyright of Graham Bowen



Is the wound infected?

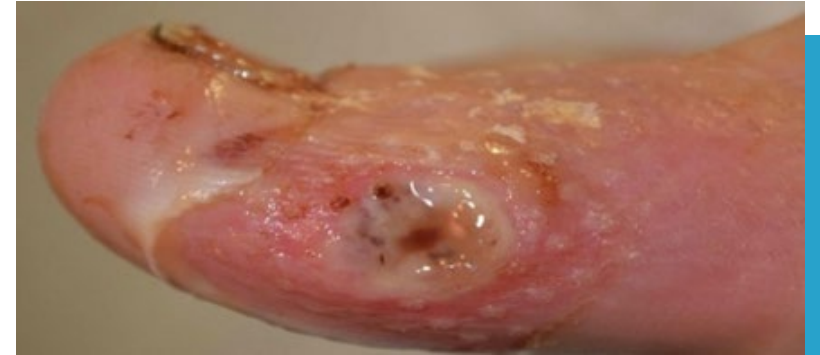
- Best practice publications
- Local guidelines/policies
- Host response to clinical signs
- Microbiological analysis



~80% of non-healing wounds contain biofilms⁷

Biofilms are not visible to the eye, but signs of infection indicate their presence, e.g.: ³

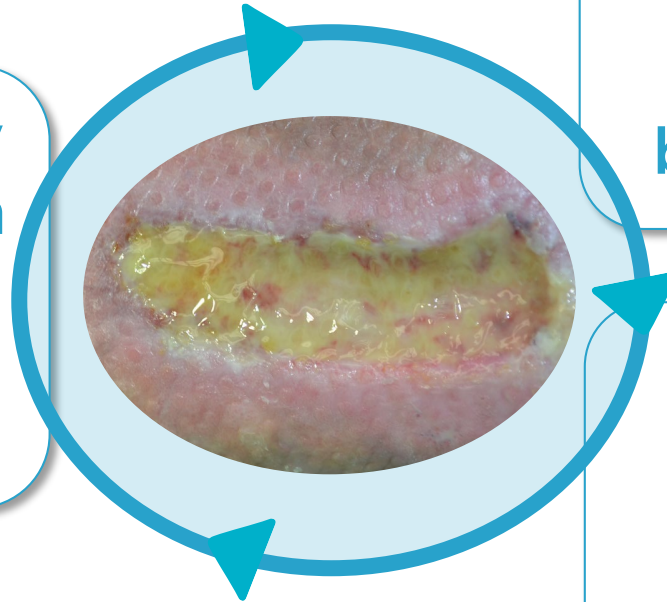
- Delayed wound healing
- Increased exudate and slough
- Increased inflammatory response
- Erythema
- Malodour
- High bacterial load



Biofilms can keep the wound in an inflammatory state



Chronic inflammatory response can result in tissue damage and delayed wound healing^{8,9}



Non-healing wounds are an ideal environment for biofilm formation^{5,10}

Presence of biofilm causes chronic inflammatory response¹¹

Poll: Where on the Infection Continuum would you place this wound?

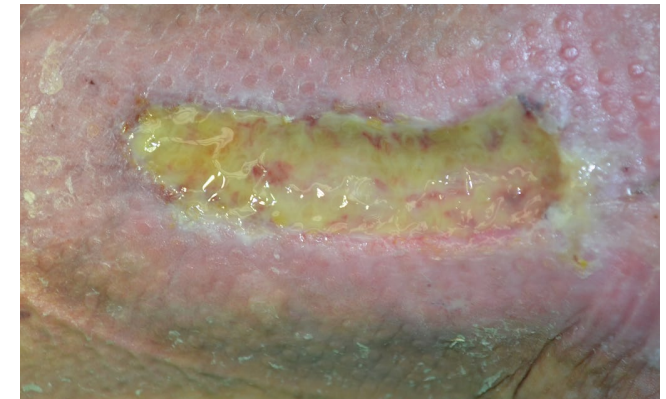
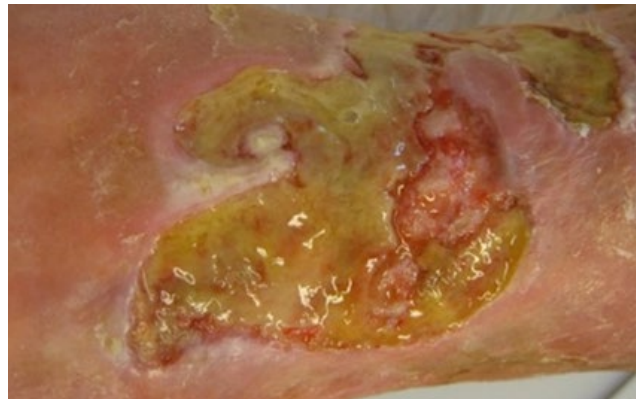
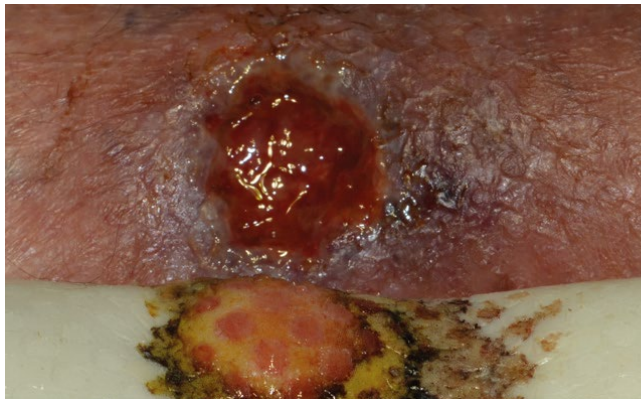
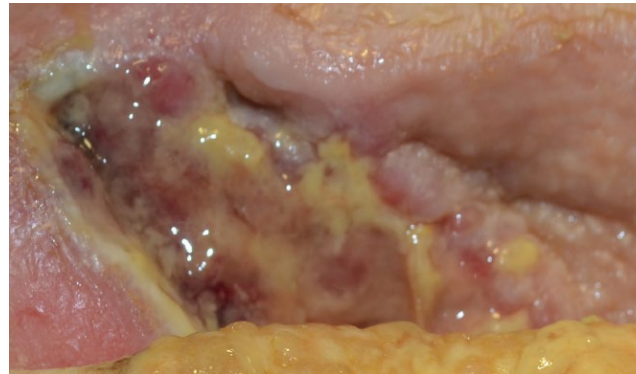
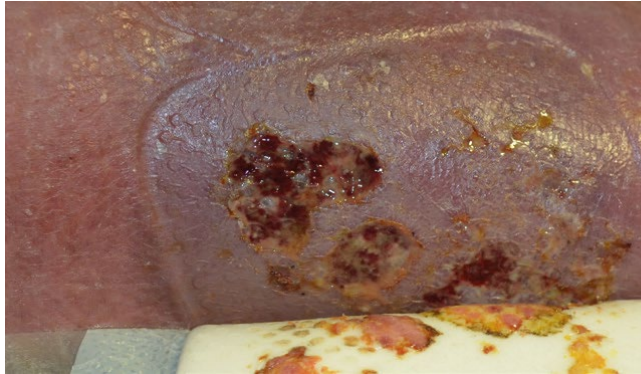
Localised or spreading



THE GAP AND WOUND INFECTION



**80% of wounds are less than
2cm in depth¹²**



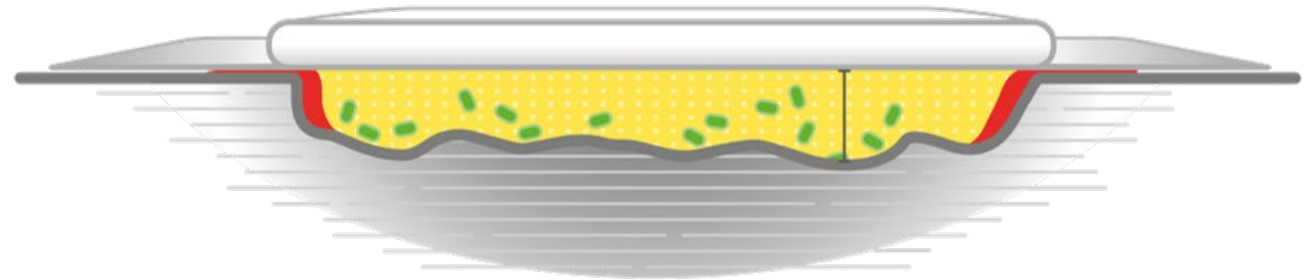
Role of the gap in wound infection and biofilm formation



Infected wounds are often characterised by the presence of increased exudate, slough and non-viable tissue due to high bacterial load.

The prevalence of
biofilm in chronic
wounds may be
greater than

80%



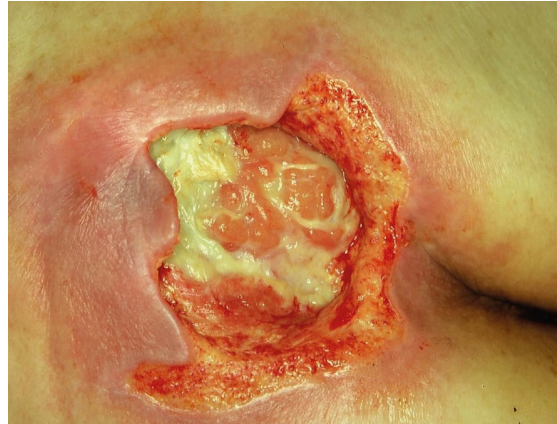
Challenges of the gap and current practice

Wound bed



Delayed healing and inflammation potentially due to high bacterial load.

Wound edge



Infection can damage the wound edges and result in wound enlargement.

Periwound skin



Excess exudate increases the risk of maceration, leading to an increased risk of infection in the periwound skin.

Poll: Would you use an antimicrobial filler on this locally infected wound?

Wound size:

Length 50mm

Width 40mm

Depth 9mm

Yes or No



USING BEST PRACTICE TO MANAGE WOUND INFECTION AND BIOFILM



International best practice for management of biofilm

Management of biofilm must recognise that there is no one-step solution. Different treatment strategies should be used.⁵⁵

Wound bed preparation^{3,11}

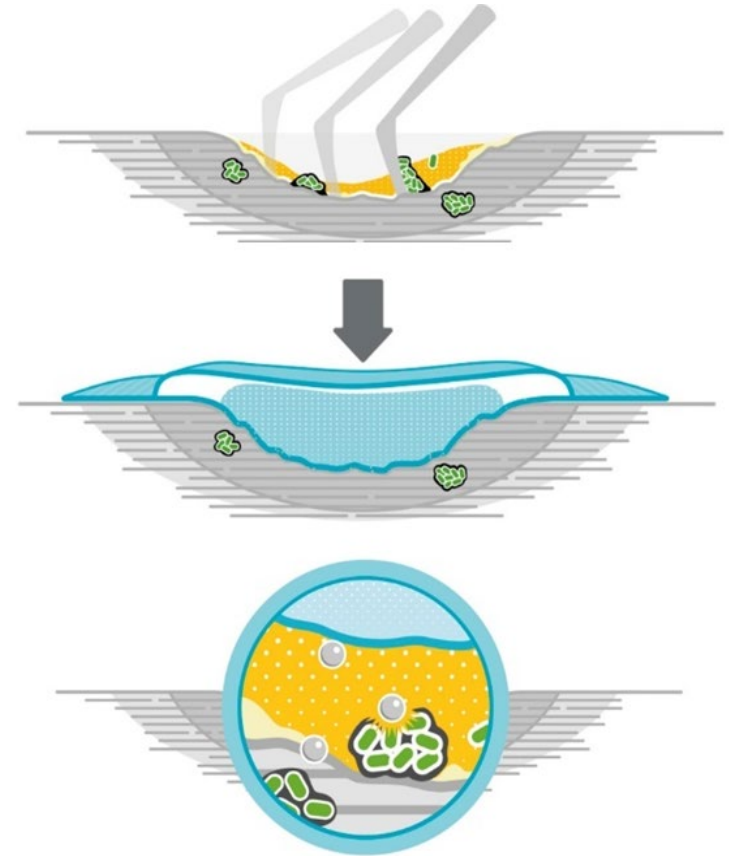
Cleanse and debride to reduce the number of microorganisms by disturbing and removing some of the biofilms.

Apply a barrier dressing¹¹

Prevent maceration, by management of exudate, and prevent recontamination

Infection management^{3,11}

Suppress biofilm formation and reduce existing biofilms and microorganisms with an active agent in the dressing.



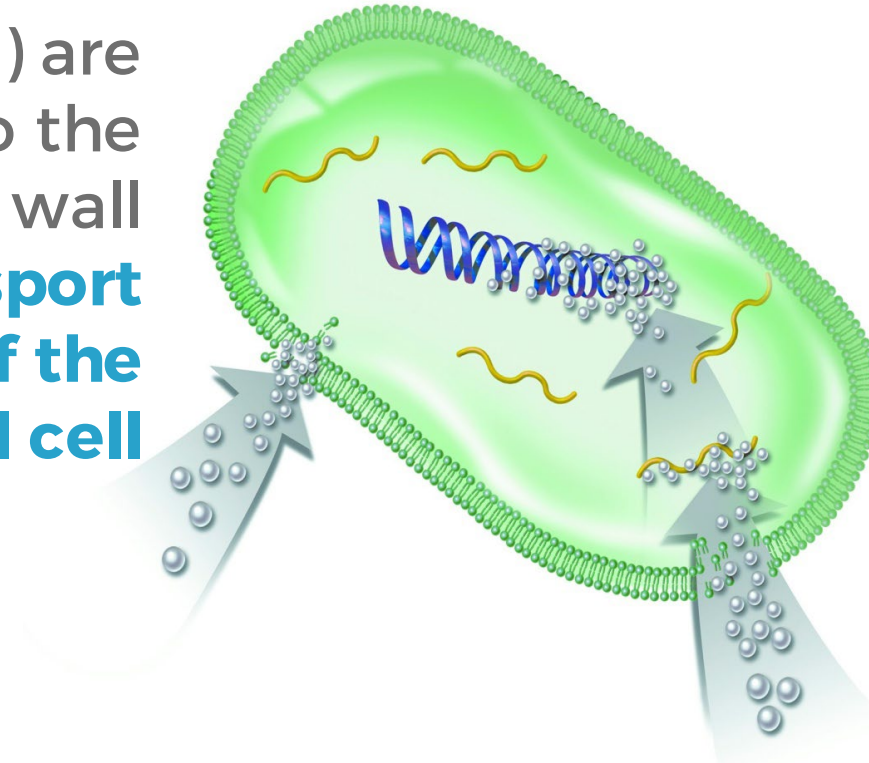
There are several options for infection management, silver is one of the most used¹³⁻¹⁵

- Silver has been used as an antimicrobial for many years
- Silver has a broad antimicrobial efficacy and is widely used in antimicrobial wound dressings
- Silver has efficacy against biofilms (shown *in vitro*)



Antimicrobial effects of silver (mode of action)¹⁶

Silver ions (Ag^+) are bound to the bacterial cell wall
→ **block transport in and out of the bacterial cell**

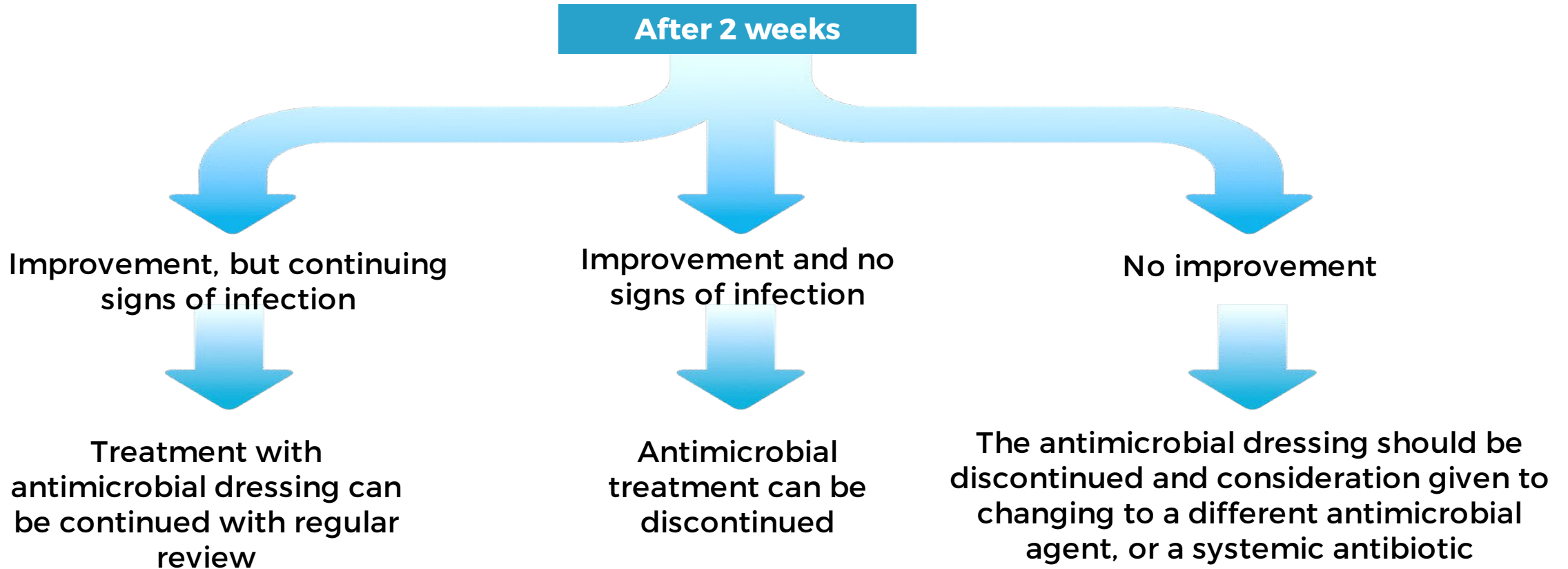


Silver ions (Ag^+) interact with DNA and inhibit bacterial cell division
→ **stop replication**

Silver ions (Ag^+) block the bacterial respiratory system
→ **destroy the energy production**

In the end the cell will leak and the **membrane burst**

The two-week challenge^{3,14}



TRANSFORMING INFECTION MANAGEMENT

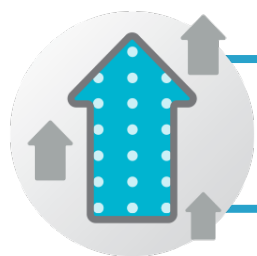
Simplifying wound infection



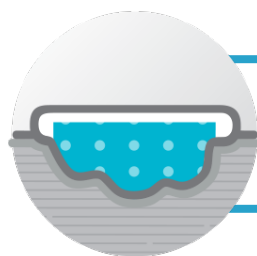
Wilma, wound patient

Biatain Ag with 3DFit Technology®

Designed to combat infection and biofilm, reduce exudate pooling and thereby reduce the risk of maceration of the wound edge and periwound skin



Absorbs vertically



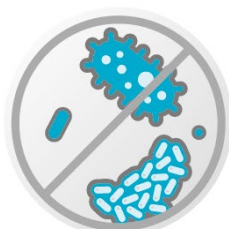
Conforms to the wound bed



Retains exudate

Kills 99.99% of mature biofilms and prevents biofilm formation¹⁷*

P.aeruginosa
-99.99%



S.aureus
-99.3%

Effective against a broad range of bacteria and fungi¹⁷



P. aeruginosa, S. aureus, MRSA, VRE, C. albicans, A. brasiliensis

Wilma's story



Day
0



Day
40

Treatment
with
Biatain
Silicone



Day
2

Treatment
with
Biatain
Silicone Ag



Day
131

Treatment
with Biatain
Silicone Lite

Biatain Silicone Ag on a DFU



Day
0



Day
35



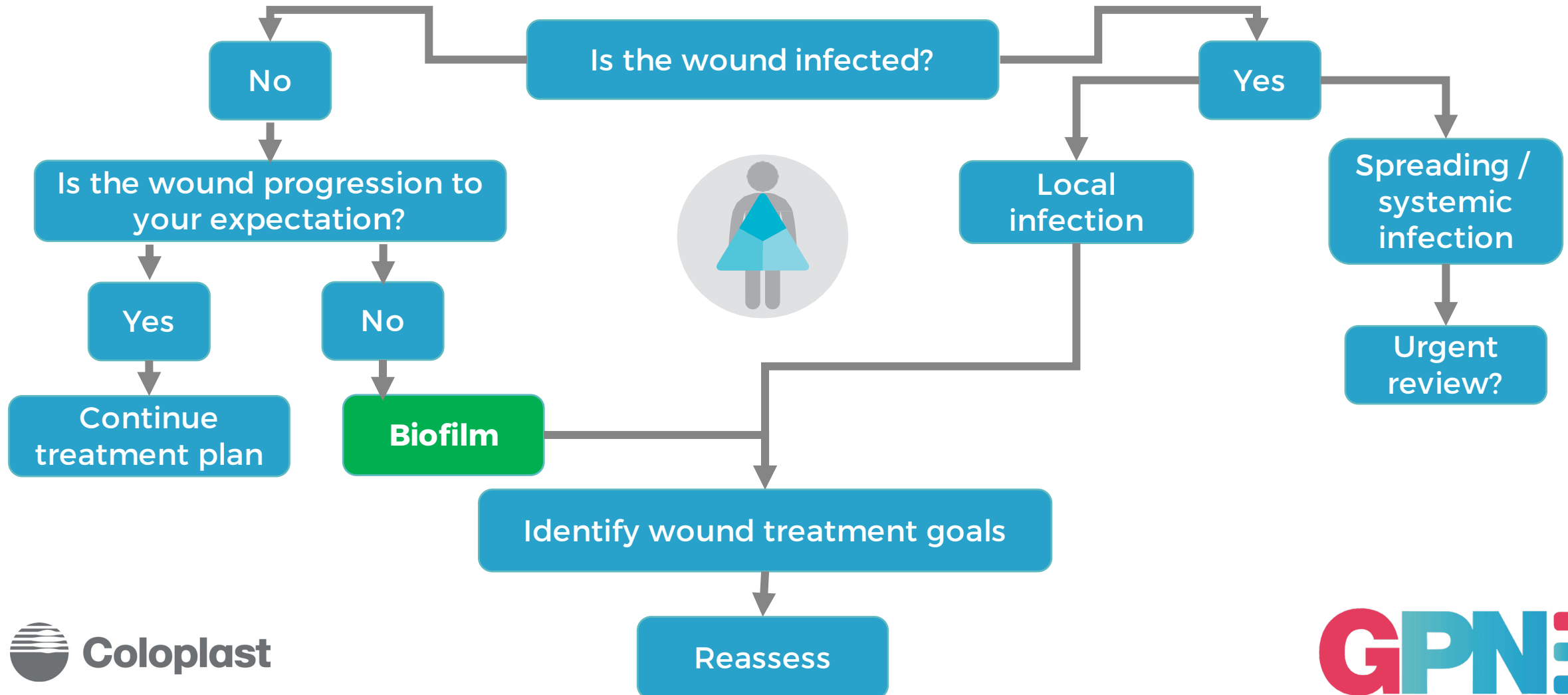
Day
70



Day
90

Biatain Silicone Ag dealt effectively with the bacterial burden in the wound. Not only were there no longer any signs of infection, but there was improvement seen in the wound edge and periwound skin demonstrating that the exudate was being managed effectively.

Simplifying wound care for you



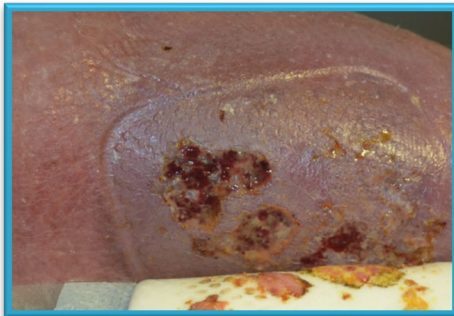
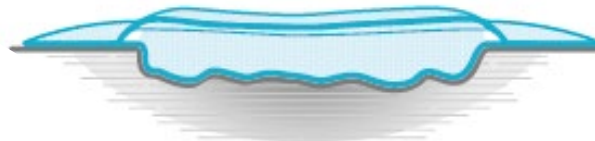
Simplifying wound care for you

Promoting optimal healing conditions for infected wounds with the *2-Week Treatment Plan*.

Wound bed preparation

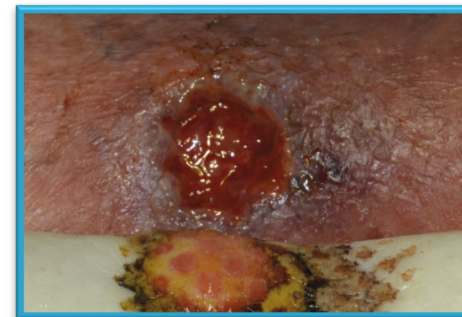
A conforming dressing
with 3DFit Technology®

Infection management



Superficial depth

✓ Biatain Silicone Ag
/ Biatain Ag



0-2cm in depth

✓ Biatain Silicone Ag
/ Biatain Ag

What can you do to transform wound infection management for your patients?

'He is happy. I can see him smiling more now, his expression has opened up. He isn't crippled by the pain anymore.'

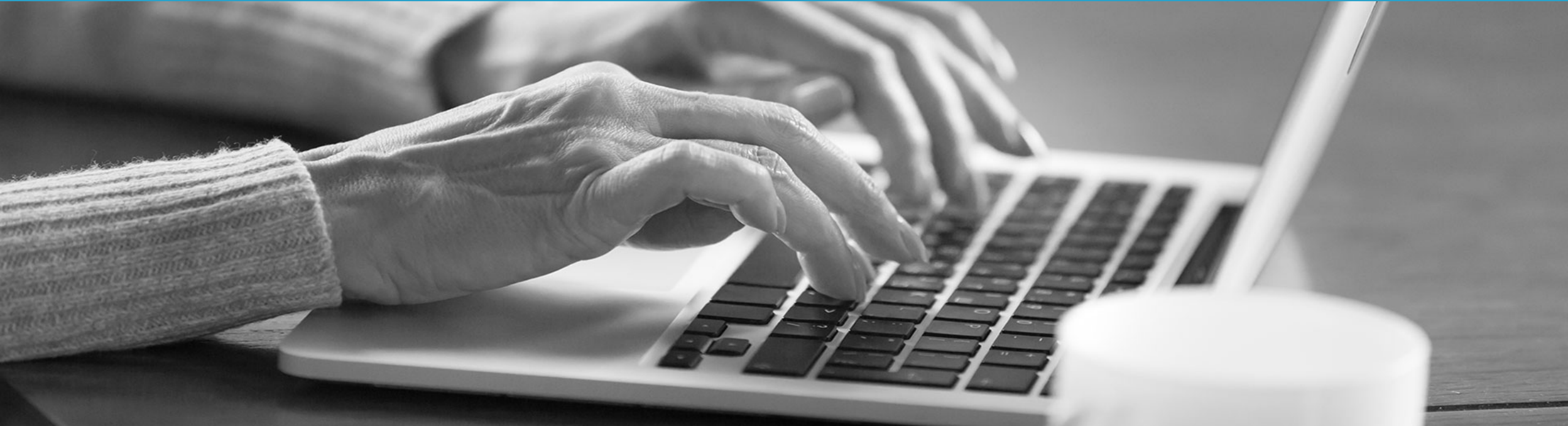


Carlos, wound patient, with his partner

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