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The Next Stage in the Story of Wound Hygiene: Implementation of Proactive Care

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Wound Hygiene

Wound Hygiene is a proactive wound care protocol that, through consistent and repetitive decontamination, promotes the healing of hard-to-heal wounds. The four steps of Wound Hygiene (see Figure 1) are:

1. Cleanse the wound and periwound skin
2. Debride
3. Refashion the wound edges
4. Dress the wound

International Consensus on Wound Hygiene

In a survey of 1,478 international respondents, 57% had heard of Wound Hygiene; of those, 75% had implemented Wound Hygiene; of those 80% reported improved rates. The major barriers to implementation identified in this survey included lack of confidence, lack of competence, minimal specific research data and the need for further publications to support implementation as an addendum to the original consensus statements.

Barriers to Implementing Wound Hygiene

- Lack of equipment
- Lack of educational support
- Lack of peer support
- Lack of leadership support
- Existing protocols

A recently published international consensus statement, Embedding Wound Hygiene into a Proactive Wound Healing Strategy[1] was developed to provide

Figure 1. The four activities of Wound Hygiene

more detail on implementing proactive Wound Hygiene into practice (see Figure 2). The document states that all hard-to-heal wounds benefit from Wound Hygiene and emphasizes proactive care for better healing results.

Wound Hygiene targets biofilm, which is present in the majority of hard-to-heal wounds and is a key physical barrier to the healing process. All open wounds are vulnerable to biofilms. Management of biofilm requires repetitive removal to improve the wound environment; it must be addressed on an ongoing basis.

Implementation of Wound Hygiene

Provision of Wound Hygiene depends on clinical skill set, tissue type, intensity of pressure and available method(s) of debridement.

Clinical Competence

General care practitioners provide routine care including wound cleansing, debridement with a soft pad or gauze, assessment for signs of infection, application of a wound dressing and referral of a patient to an advanced practitioner. A general wound care provider can assess vascular supply and the environment in a more holistic manner. They can also identify local or spreading infection, perform selective sharp debridement of non-viable tissue, and refashion wound edges to achieve pinpoint bleeding. An expert wound care provider can diagnose and manage the wound's underlying pathophysiology. They can use pharmacology, as required, and perform surgical sharp debridement. Clinicians should refer to local regulations for competency requirements and specific policies.

Tissue Types and Considerations

Necrotic (or devitalized) tissue is black or brown in colour with either a hard/dry/leathery or soft/wet texture. It can be either firmly or loosely attached to the wound bed. For patients with necrotic tissue, removal of eschar may open an area that is unhealable, may allow bacteria into the wound, and may induce unsolvable pain. For these reasons, complete wound diagnosis and development of a comprehensive plan of care is critical. Dry necrosis may be "nature's Band-Aid," but underlying issues need to be identified and addressed. Debridement may be indicated if the patient has undergone revascularization, if there is an abscess or active infection or if the patient presents with a superficial healing area with detaching eschar and periwound skin ingrowth. If indicated, necrotic tissue can be vigorously debrided by an expert wound care clinician in a surgical procedure.

Sloughy tissue is yellow/white material in the wound bed that is typically wet. It may present in thick patches over the surface of the wound or as a thin coating. Clinicians need to ensure it is not an exposed tendon, joint capsule, dressing debris, deep-dermal or full-thickness burn, purulence, or extracellular matrix/

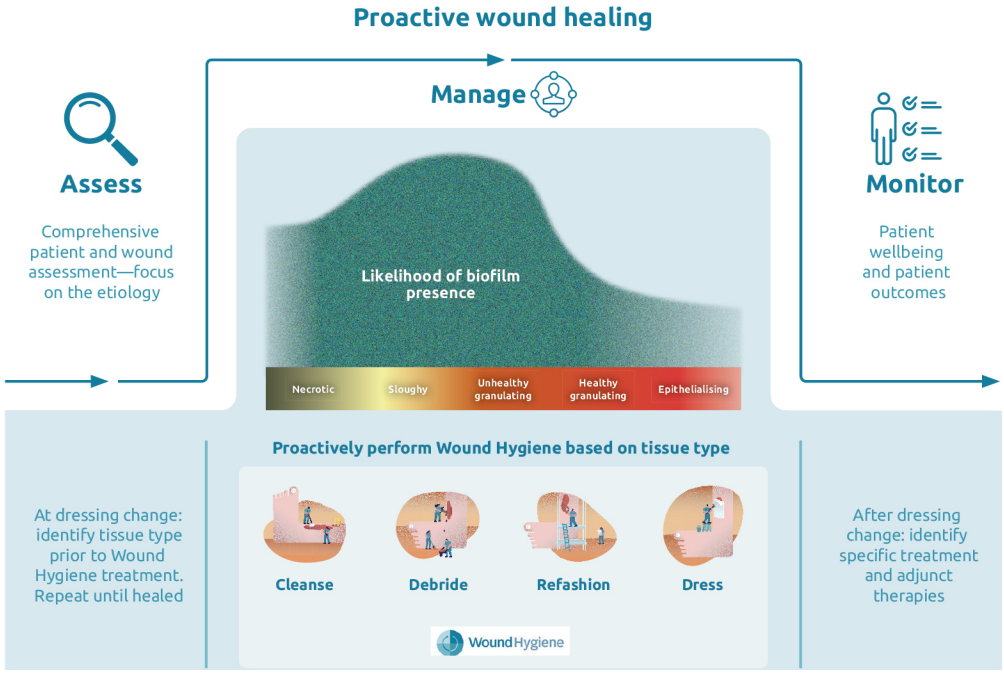

Figure 2. Proactive Wound Healing

biological product. Pain and bleeding must be considered before removing slough. Sloughy tissue can be removed using surgical, sharp, larval or mechanical debridement at a vigorous intensity. The surface should be agitated to pinpoint surface bleeding.

Healthy granulation tissue needs to resolve in order for epithelialization to occur. Clinicians should monitor patients for hypergranulation (the result of abnormal wound bed conditions, such as granuloma or chronic infection), where the tissue extends above the level of the surrounding skin. Hypergranulation is common in wet wounds but can also be a tumour (e.g., basal cell carcinoma). Healthy granulation tissue should be mechanically cleansed or debrided with soft debridement pads, gauze or wipes, at a moderate to gentle intensity.

Epithelialization is the final stage of wound closure, during which new skin cells begin to grow at the wound edges or on the surface to cover and close it, restoring barrier function. Epithelialization is matte in appearance, pale pink or white in colour. This skin should be differentiated from maceration, debris or superficial slough. It can be very fragile. For Wound Hygiene, clinicians should use only gentle irrigation.

Antimicrobial Dressings with Antibiofilm Properties

Antimicrobial dressings with antibiofilm properties such as the AQUACEL® Ag+ have three components: an antimicrobial (silver) agent, a surfactant (to break biofilm and allow silver access) and a chelating agent (which stops the chemical binds of biofilm).

Unhealthy granulation is a newly identified tissue type proposed by the authors of the 2nd International Consensus document. Unhealthy granulation is a stage in which the wound does not appear outwardly unhealthy and where granulation tissue is present, but where the wound is also failing to progress. This tissue is typically dark red, but may present as pale when there is poor blood supply. Unhealthy granulation tissue often bleeds (friable) on contact and may indicate wound infection. It can be present due a number of factors including ischemia, untreated pathology or biofilm. This tissue should be vigorously and intensely debrided using surgical, sharp selective, larval, ultrasonic or mechanical debridement. The wound surface should be agitated to pinpoint bleeding.

The key principle of Wound Hygiene is 'do something.' Embed Wound Hygiene as part of a holistic approach: Assess, Manage & Monitor, focus on the wound as well as the patient. Biofilm is the key barrier to healing hard-to-heal wounds and should be recognized as a threat throughout the healing trajectory. Wound Hygiene should be performed on every tissue type, at every dressing change, at every stage, until healing. The Wound Hygiene protocol has been developed/designed to enable and inspire anyone who manages wounds to adopt this 4 simple step – protocol of care.

References

1 Murphy C, Atkin L, Vega de Ceniga M, Weir D, Swanson T. International consensus document. Embedding Wound Hygiene into a proactive wound healing strategy. J Wound Care 2022;31:S1–S24

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1. Bowler PG, et al. Parsons, Wound Medicine 14 (2016) 6–11. 2. Metcalf DG et al. J. Wound Care 2016; Vol25, No3. 3. Metcalf DG, et al. Int Wound J 2017; 14: 203-213. 4. Malone M et al. 2017. JWC; 20-25.

* When compared to AQUACE® Ag Extra™ dressing and other silver-only competitor dressings: ACTICOAT™ 7 and SILVERCEL™ Non-Adherent dressings.

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