The Role of the Australian Community Pharmacist in Acute Wound Care

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Wounds Australia is the peak national health body for the prevention, treatment, management and healing of wounds.

The Pharmacy Guild of Australia

The Pharmacy Guild of Australia is the national peak body representing community pharmacies and advocating for their vital role in delivering accessible healthcare to Australian communities.

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Foreword

Australia's large landmass (spanning over 7 million square kilometres) and uneven healthcare distribution create significant barriers to timely medical care, especially in rural and remote areas where services can be scarce, leading to poorer health outcomes compared to metropolitan regions (Australian Institute of Health and Welfare, 2016; Tehan et al, 2022). Long general practitioner (GP) and hospital wait times, coupled with a projected 38% increase in demand for GP services by 2032 (Cornerstone Health, 2022), places an additional strain on the system. Alarmingly, one in four Australians do not see a GP when needed, with half citing lack of appointment availability as the primary barrier (Pharmaceutical Society of Australia, 2024).

As a result, community pharmacies have become an essential and highly trusted component of the healthcare system, often serving as the first point of contact for individuals seeking medical advice and support (Roy Morgan, 2017; Pharmacy Guild of Australia, 2024). With an expanded scope of practice, pharmacists are increasingly managing minor acute wounds, such as cuts, abrasions, minor burns and superficial injuries, which can often be safely assessed and treated in the pharmacy setting, or referred to other healthcare professionals where necessary.

Chronic wounds, including diabetic-related foot ulcers, venous leg ulcers and pressure injuries, typically remain outside the scope of community pharmacy and are managed in primary care, outpatient or hospital settings. This best practice statement (BPS) focusses specifically on the evolving role of community pharmacists in managing acute wounds.

To meet this role, pharmacists require current, evidence-based knowledge in wound assessment and dressing selection. The wide range of wound dressings available and the nuanced requirements of different wound types can be challenging, especially for those new to this area of care. This document offers practical guidance to support informed dressing choices, explaining not just which products to use, but why these choices matter for clinical outcomes and resource efficiency.

This guidance aligns with value-based healthcare principles, which prioritise achieving the best possible outcomes over short-term cost savings. While basic low-cost dressings may appear economically beneficial, their poor performance often leads to delayed wound healing and increased waste and costs (Brindle and Farmer, 2019). In contrast, advanced dressings promote undisturbed wound healing by reducing unnecessary dressing changes, managing exudate and lowering infection risk. This approach improves healing outcomes and reduces the burden on healthcare professionals time and associated care costs (Moore and Coggins, 2021).

To reflect these evolving standards, a multidisciplinary panel of pharmacists, podiatrists, nurses, GPs and academics convened online in March and April 2025 to review the roles and responsibilities of pharmacy teams in wound care. This BPS was developed by building on the framework established by Ousey et al (Wounds UK, 2021), which explored wound care and dressing selection for pharmacy teams in the UK, and has been adapted to suit the Australian healthcare context.

This document aims to:

- Inform pharmacists about the underpinning principles of best practice and the latest evidence base in acute wound care and dressing selection
- Equip pharmacy teams to manage wounds with confidence, supporting improved clinical outcomes for people across Australia
- Educate health professionals about the evolving and integral role of pharmacists in multidisciplinary wound care teams
- Encourage pharmacy teams to adopt value-based approaches, moving away from routine use of traditional, low-cost dressings toward advanced products that support undisturbed wound healing.

Lusi Sheehan (Co-chair) and Professor John Smithson (Co-chair)

The current landscape of healthcare in Australia

Australia's health care system is an integrated mix of public and private providers, underpinned by the universal public health insurance programme, Medicare. Funded through a levy on taxable income and general government revenue, Medicare ensures that all Australian citizens and permanent residents have access to subsidised medical services, free public hospital care and medication under the Pharmaceutical Benefits Scheme. Safety net provisions are also in place to limit annual out-of-pocket expenses for individuals with high medication needs. Primary care services, including GP, allied health and pharmacy, are largely privately operated but subsidised through Medicare rebates.

Despite the comprehensive nature of Medicare, significant gaps remain in coverage, particularly in relation to wound care services. Beyond dispensing and managing medication, professional services are typically self-funded by the individual. At present, there is no universal, publicly funded scheme for wound care consumables. However, some targeted programmes do exist. These include the National Disability Insurance Scheme (2025), which funds wound care services and consumables for eligible individuals with disabilities, and the Department of Veterans' Affairs (2024), which provides support through rehabilitation and treatment programmes, including access to dressings via the Repatriation Pharmaceutical Benefits Scheme.

In addition, recent government initiatives have been introduced to support specific populations. One example is the $47.8 million Chronic Wound Consumables Scheme, which subsidises the cost of wound care products, such as bandages, dressings and adhesives, for older Australians with diabetes (aged 65 and over) and First Nations individuals (aged 50 and over; Australian Government Department of Health, 2025).

Burden of wounds

It is estimated that at any given time, approximately 450–500,000 Australians are living with an unhealed wound (Graves and Zheng, 2014; Sussman, 2023). Yet, the true scale of this burden and its associated costs remains incompletely defined, as most available figures are derived from modelled estimates (Graves and Zheng, 2014; Frescos et al, 2023). Australia ranks among the top ten countries globally in healthcare spending on wound care (Queen and Harding, 2024). Notably, in 2019, national expenditure on wound treatment was estimated at USD 5.14 billion (~AUD 7 billion; Queen and Harding, 2023).

Evidence from community health services further illustrates the scale of the problem, particularly for acute wounds. For example, 56% of wounds treated by a community nursing service were classified as either an acute wound or a skin tear (Carville et al, 2022). In another Australian study, the cost to manage a sample of 1,053 acute wounds was reported at AUD 390,641 (Wilkie et al, 2023). However, these findings were based on a relatively limited dataset drawn from hospitals, residential aged care facilities and GP service in Queensland, South Australia and Western Australia. The model was compared against data from a community care provider and may not fully reflect national costs.

Role of the pharmacist

Each year, Australians make over 462 million visits to pharmacies, with approximately 218 million prescriptions dispensed and 460 million over-the-counter products sold. The pharmacy sector employs around 70,000 staff, including approximately 20,000 registered pharmacists (Pharmacy Guild of Australia, 2024).

Pharmacists are highly qualified health professionals, typically completing a four-year university degree, followed by a one-year supervised internship. Upon registration with the Pharmacy Board of Australia, pharmacists are required to undertake continuous professional development to maintain their clinical skills and knowledge.

As a cornerstone of accessible healthcare, pharmacies typically operate seven days a week. In metropolitan areas, 96% of people live within 2.5km of a pharmacy; in regional areas, this figure is 74%. By comparison, hospitals and other primary healthcare services are generally less accessible, especially outside metropolitan centres. Nearly 18,500 people in remote areas still do not have access to primary healthcare services, including hospitals, within a one-hour drive from home, although this is a notable improvement from 44,930 in 2022 (Bishop et al, 2023).

Meeting the growing healthcare demand

As Australia's healthcare needs continue to grow, driven by an ageing and expanding population, community pharmacies are stepping up to help bridge critical service gaps. When GPs, nurse practitioners and/or hospitals are unavailable or difficult to access, pharmacists increasingly serve as the first point of contact, especially for minor ailments like colds, headaches and other common conditions. This shift is significant with one in four Australians reporting not seeing a GP when needed, with half citing a lack of appointment availability as the main barrier (Pharmaceutical Society of Australia, 2024).

With demand for GP services projected to increase by 38% by 2032 (Cornerstone Health, 2022), the frontline role of pharmacists is set to grow further, helping ease pressure on the broader healthcare system and improve access to timely care.

It is estimated that 2.9–11.5% of emergency department presentations could be safely managed in a community pharmacy setting, if supported by a national scheme. When applied to New South Wales, where approximately 2.88 million emergency department services are provided annually, this equates to up to 331,233 presentations potentially being redirected to community pharmacy services (Dineen-Griffin et al, 2019).

Pharmacists also consistently rank among the most trusted professionals in Australia, with 84% of adults expressing confidence in the advice they provide (Roy Morgan, 2017; Pharmacy Guild of Australia, 2024).

Community pharmacists and their scope

Pharmacists practise across a range of settings, including community, hospital, consultant, industrial, intern and specialist roles. Depending on the setting, they may manage a wide variety of health conditions and enquiries. In some jurisdictions, pharmacists are also authorised to diagnose conditions and prescribe treatments (Pharmacy Magazine, 2020).

Community pharmacists

Community pharmacists are uniquely positioned as the most accessible health professionals in Australia, practising across more than 5,800 pharmacies nationwide (Pharmacy Guild of Australia, 2024). They are often the first point of contact for individuals seeking healthcare advice and are traditionally responsible for:

- Dispensing prescription medications
- Advising on and prescribing over-the-counter medicines
- Delivering primary healthcare services (e.g. health screenings and medication reviews)
- Leading and undertaking research that informs and improves medicine use
- Responding to clinical medication queries from other health professionals (e.g. switching anticoagulants, antidepressants, opioid equivalence; Dineen-Griffin et al, 2019; Pharmaceutical Society of Australia, 2020).

Role of the Pharmacist *(Continued)*

A recent study (Sheehan et al, 2022) highlighted the positive impact of pharmacist-led wound care services in community settings. Participants valued their accessibility and comprehensive approach, reporting high confidence in pharmacists' clinical expertise. These findings indicate strong consumer demand and a clear opportunity for workforce development. Expanding pharmacist training in wound care could strengthen primary care services, address current gaps, and help reduce the global wound care burden.

Enhanced scope of practice

The Australian Government has recognised the need for improved wound care and enhanced access to primary healthcare services. In response, it has invested in national education and awareness campaigns and is supporting the development of new training and protocols for pharmacists. These initiatives align with broader efforts to address rising healthcare demands and alleviate pressure on GPs and emergency departments. Increasingly, Australians are turning to their local pharmacies for accessible and timely support.

A pharmacist's scope of practice refers to the professional activities they are educated, competent, accountable and authorised to perform (Pharmacy Guild of Australia, 2023). Full scope of practice would see pharmacists using their complete training and skills. However, unlike most other healthcare professions, the scope of practice for pharmacists is expanding at different rates across Australia, with each state and territory implementing its own rules and pilot programmes. It is important for pharmacists to be aware of the specific regulations and opportunities in their state or territory as the scope of practice continues to evolve.

To support their evolving role, many pharmacists are undertaking postgraduate qualifications in wound care and participating in specialised training programmes. Importantly, the involvement of all staff in wound management is essential and not limited to registered pharmacists. Well-informed non-pharmacist staff play an important role in guiding individuals on early wound care and facilitating connections with allied health professionals, which helps prevent wounds from becoming difficult to heal. Early and accurate diagnosis, combined with appropriate treatment of wound infections, can reduce pain, morbidity and mortality, lower the risk of complications (including amputations) and significantly decrease healthcare costs.

Role of the pharmacist in wound care

Pharmacists are increasingly involved in wound care in response to the growing demand for primary care and emergency services. Their accessibility and existing infrastructure make them ideal providers to support wound care, especially in areas where access to other settings may be limited.

Through timely identification and appropriate referral, pharmacists can collaborate with the multidisciplinary team to ensure that

The key clinical roles of participating pharmacists in wound care may include:

- Assessing and triaging wounds
- Performing wound cleansing procedures includes cleansing, decontamination, bleeding control, wound closure, and dressing application or removal. Clinicians should assess their own skills and competence to ensure these procedures are performed safely and effectively, and provide treatment plans for wound care management when appropriate
- Providing patient education, including verbal or written instructions on treatment duration, dressing change frequency, advice on non-prescription wound care products, expected healing progress and red flags that require medical attention
- Documenting wound care services
- Managing wound care inventory and supplies
- Supporting the management of patient comorbidities **[See Box 2, page 9]**
- Recognising when to refer individuals to other healthcare providers — e.g. a GP, wound clinic, specialist or emergency department (Yvette and Terrie, 2006; Jin, 2015; Cheung et al, 2023).

Figure 1. *Pitting oedema in the right foot. Image courtesy of Dr Dianne Smith.*

Figure 2. *Bilateral oedema with weeping stasis eczema and early ulceration. Image courtesy of Dr Dianne Smith*

Figure 3. *Oedema. Image courtesy of Professor Geoff Sussman.*

Figure 4. *Oedema. Image courtesy of Professor Geoff Sussman.*

any concerns are further investigated. This is particularly important for individuals with comorbidities such as uncontrolled diabetes, hypertension, or obesity, conditions that are frequently encountered in everyday practice and strongly associated with an increased risk of chronic wounds (Kheder, 2025) and infection. Pharmacists should also support skin tear prevention by recommending the use of good moisturisers, encouraging regular exercise and promoting good nutrition (Nokaneng et al, 2025). Nutrition should be a consistent component of patient education, especially in older adults who are at risk of low protein and fluid intake. Ensuring sufficient nutritional status can help maintain skin integrity and support overall wound prevention efforts.

In addition to direct wound care, pharmacists play a critical role in preventative care through medication reviews. These reviews provide a golden opportunity to assess an individuals overall health and identify early risk factors for wound development. For example, a pharmacist may detect early signs of venous insufficiency, such as oedema (soft tissue swelling; **Figures 1–4**), pain, eczema or staining/discoloured skin and evaluate whether any medications may be contributing to the condition (Kheder, 2025).

Medication

Medication is a critical component of disease management. When managing an individual with a wound, it is important to obtain a full medication history covering prescribed medications, over-the-counter treatments and complementary therapies, including oral, injectable, topical and inhaled formulations (Bennett et al, 2024).

Some medications interfere with wound healing by altering cellular processes, signalling pathways and inflammatory mediators (Bennett et al, 2024). Medications with long half-lives may continue to affect the individual even after discontinuation, making it important to identify current and past medications to mitigate potential complications.

Identifying previously administered drugs is particularly important in perioperative care. For example, risks of impaired wound healing may be mitigated by delaying surgery following the use of mammalian target of rapamycin (mTOR) inhibitors or vascular endothelial growth factor (VEGF) inhibitors, or by withholding non-steroidal anti-inflammatory drugs (NSAIDs) around the time of surgery. See **Box 1** for examples of medications commonly associated with impaired wound healing (Hotaling and Black, 2023).

Medication reviews help ensure that drugs potentially impairing wound healing are discontinued when no longer clinically indicated. Dosage and treatment duration also influence outcomes; for example, short-term colchicine use for acute gout is less likely to interfere with wound healing compared to long-term use for prophylaxis.

Pharmacists are key advisors on appropriate prescribing, particularly for individuals with wounds. Their knowledge of pharmacodynamics, drug interactions and physiology enables them to guide prescribers in minimising risks associated with delayed healing while ensuring essential treatments continue.

Box 1. Common medications that may impair wound healing (adapted from Hotaling and Black, 2023).

Medication/substance class	Examples
Corticosteroids	Prednisolone, Dexamethasone
Non-steroidal anti-inflammatory drugs (NSAIDs)	Ibuprofen, Ketorolac, Diclofenac, Naproxen
Drugs for gout	Colchicine
Cytotoxic/antineoplastic agents (antimetabolites, chemotherapy)	Cyclophosphamide, 5-fluorouracil derivatives, Hydroxyurea
Nicotine (tobacco, patches, gum, vaping)	Nicotine

Wound care

MYTH

All wounds need 'fresh air' to dry out

TRUTH

Wounds heal best in a moist but not wet environment. Dry wounds slow granulation tissue formation and epithelialisation, while a properly moist environment supports capillaries, fibrin and collagen, promoting faster, healthier healing.

All wounds follow a systematic process of repair, but the duration of this process varies depending on the type of wound, its location, depth and amount of tissue loss, as well as the condition of the individual.

Types of wounds

Wounds can be either acute or chronic.

Acute:

- An acute wound is a wound with an aetiology that occurs suddenly, either with or without intention, but then heals in a timely manner (International Wound Infection Institute (IWII), 2016).

Chronic (hard-to-heal, non-healing):

- Instead of progressing through the normal wound healing phases of haemostasis, inflammation, proliferation and maturation, chronic wounds become stagnant or remain prolonged in the inflammatory phase. Inhibited healing may result from intrinsic and extrinsic factors that impact the person, the wound and the healing environment (IWII, 2022).

The types of wounds encountered by community pharmacists vary depending on the pharmacy's location and proximity to healthcare facilities. Wound healing is influenced by comorbidities and various intrinsic and extrinsic factors **[Box 2]**.

Pharmacists' role in acute wound care

In community pharmacy settings, the most commonly observed wounds are acute in nature. These include minor injuries such as bites, burns, grazes and skin tears **[Table 1, page 10–12]**. Management of chronic wounds typically falls outside the scope of practice for pharmacists who do not have advanced postgraduate training and clinical experience. Therefore, this document focusses on the acute management of wounds, where pharmacists can play a valuable role. Early intervention through appropriate assessment, first-line treatment, advice and timely referral may help prevent complications and reduce the risk of acute wounds progressing to chronicity. Such interventions may ultimately improve patient outcomes while reducing the burden on the healthcare system.

Box 2. Factors that affect wound healing (adapted from Anderson and Hamm, 2014).

Factor	Category	Examples
Intrinsic	Immune function	Immunosuppression (e.g. HIV/AIDS, cancer treatment, corticosteroids, chemotherapy)
	Age	Delayed healing due to reduced cellular regeneration and immune function
	Comorbidities	Diabetes, peripheral arterial disease, chronic kidney disease, chronic venous insufficiency, heart failure, liver disease, cancer, autoimmune diseases (e.g. lupus)
	Nutrition	Protein-energy malnutrition, vitamin C and zinc deficiency, dehydration
Extrinsic	Mechanical stress	Pressure, shear or friction (e.g. from immobility or medical devices)
	Debris	Foreign material, necrotic tissue or biofilm
	Moisture imbalance	Desiccation impairs cell migration; maceration causes tissue breakdown
	Chemical stress	Cytotoxic agents (e.g. povidone-iodine, hydrogen peroxide, chlorhexidine)
	Infection	Bacterial or fungal contamination
	Other factors	Inadequate wound care, inappropriate dressings, poor hygiene

Table 1. Common acute wounds seen in pharmacies in Australia.

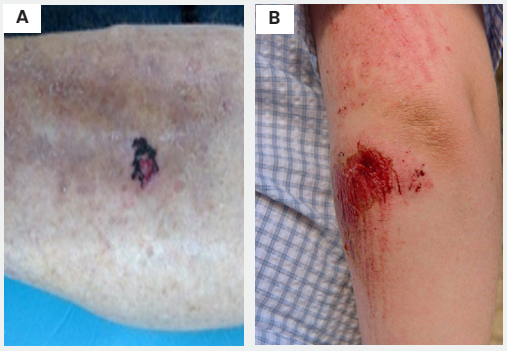
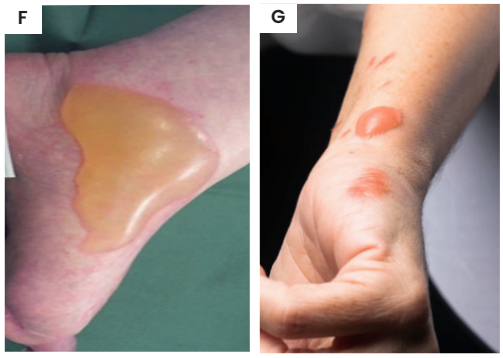
Acute type	Special considerations	Example
Abrasions, grazes, scrapes	■ Initial first aid if necessary ■ Cleanse and remove any debris and exudate during assessment and at each dressing change ■ Apply an appropriate dressing based on the wound's size, depth, level of exudate and location.	 A B
Bites (e.g. insect, animal)	■ Assess for infection (e.g. cellulitis) and monitor for allergic reactions ■ Immediately cleanse with antiseptic; if mucous membranes (eyes, nose or mouth) are exposed, flush with copious water ■ Refer to GP or emergency department if an open wound is evident or if the patient is at high risk of infection.	 C
Bleeding wounds	■ Apply direct pressure and elevate ■ Apply an alginate dressing to control bleeding and promote haemostasis ■ Refer if bleeding continues >15 minutes or if wound is deep/exposes fat, tendon, joint or bone.	 D E
Blisters	■ Cleanse gently ■ Apply silicone foam dressing to absorb fluid from a deflated blister ■ Prevent a medical adhesive-related skin injury (MARSI): use low-adhesion dressings (e.g. silicone-based, non-adherent), remove gently in the direction of hair growth and avoid reapplying adhesives to fragile skin ■ Monitor for signs of infection (redness, heat, pus, increased pain).	 F G

Table 1. Common acute wounds seen in pharmacies in Australia. *(Continued)*

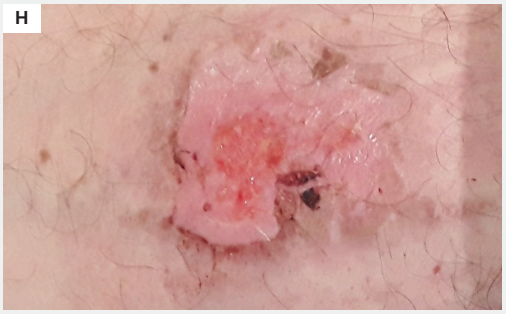
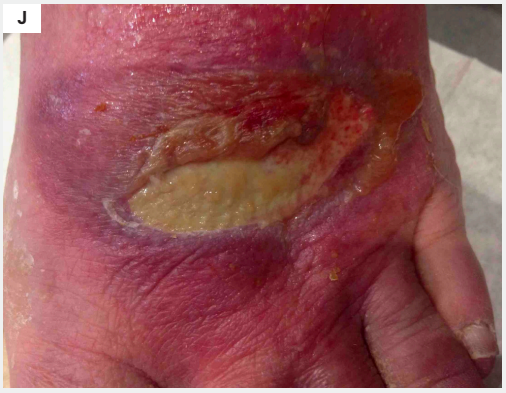
Acute type	Special considerations	Example
Burns and scalds (including sun burns)	**Superficial** ■ Most burns will be superficial, meaning they only involve the top layer of the skin and usually heal in 3–6 days ■ Cool affected area with running water for 20–30 minutes (do not use ice/iced water) ■ Apply an appropriate dressing based on severity (Sussman, 2023) ■ Refer to burn or emergency care if: • >10% Total Body Surface Area (TBSA) in adults or >5% TBSA in children • Involves majority of hand or foot, any part of face or genitalia or circumferential on a limb or the torso • Has not healed within the first week (Queensland Health and the Royal Flying Doctor Service, 2022).	H  I 
	Deep ■ Damage extends to dermis and subcutaneous tissue ■ Assess cause and extent of damage ■ Refer to burn or emergency care specialist ■ May require infection prevention, debridement and grafting (Sussman, 2023).	J 
Cuts	■ Cleanse and control bleeding ■ Consider wound closure strips or tissue glue only for non-flexor areas (e.g. avoid joints/high-movement areas) ■ For small, superficial cuts, apply a film or island film dressing ■ Refer if cut is deep, gaping, on face/hands, or other functionally important areas, heavy bleeding, signs of infection or uncertainty about closure.	K 

Table 1. Common acute wounds seen in pharmacies in Australia. *(Continued)*

Acute type	Special considerations	Example
Skin tears	■ Likely to affect older people with fragile skin ■ Gently reposition any skin flaps without stretching the skin ■ Prevent MARSI: avoid adhesive strips and choose minimal-adhesion dressings (e.g. silicone-coated dressings), remove gently in the direction of hair growth, and avoid reapplying adhesives to fragile skin (LeBlanc et al, 2018).	L  M 
Surgical wounds (e.g. sutures)	■ Monitor for infection and dehiscence (wound reopening) ■ Cleanse with sterile saline or a non-cytotoxic antiseptic cleanser, and cover with an island film dressing or a silicone foam dressing, as appropriate. ■ Refer for ongoing wound care or specialist review as needed.	N  O 
Self-injuries/ self-mutilations	■ Provide first aid if necessary ■ Assess for mental health needs ■ Refer to appropriate psychological and support services.	P 
Post-radiotherapy burns	■ Avoid adhesives and excessive drying ■ Use a sheet or amorphous hydrogel to miminise skin desquamation or damage following radiotherapy ■ Monitor for infection or delayed healing ■ Refer if breakdown is severe or persistent.	Q 

Images A, H, J, K, L, N, Q courtesy of Lusi Sheehan; B, E, G, I, O courtesy of Professor Geoff Sussman; C, P courtesy of iStock (contributors kmatija, axelb, PS3000). D courtesy of Dr Dianne Smith; F, M courtesy of Queensland University of Technology.

Clinical terminology for wound assessment

Using standardised, clinically appropriate terminology to describe wounds is essential for accurate wound assessment, clear documentation and effective communication between healthcare providers. Consistent terminology supports ongoing monitoring and helps guide treatment and referral decisions based on a shared clinical understanding.

Table 2 provides an overview of key terms commonly used in clinical practice to describe wound appearance and condition. These terms help pharmacy staff identify wound types, recognise complications and make appropriate product recommendations or referral decisions. While some terms are more relevant to chronic wounds, it is important to understand all terms to support timely referral to the appropriate healthcare professional.

Table 2. Terminology for clinical description of wound presentation and appearance.

Devitalised (non-viable/necrotic) tissue	Epithelial tissue	Erythema
Dead (devitalised) tissue that is dark (black, brown, dusky red or purple) in colour and comprised of dead tissue cells. It results from prolonged ischaemia or infection. In dark skin tones, contrast may be less visible. Inspect texture and surrounding tissue.	New skin cells that form and migrate across the wound during the final stages of healing (epithelialisation). Appears pink or pearly white and may wrinkle when lightly touched. In dark skin tones, it may appear pale, greyish or lightly pigmented.	Superficial reddening of the skin (EPUAP, NPIAP, PPPIA, 2019) caused by capillary dilation. It appears red in light skin tones. In dark skin tones, erythema may present as deep red, purple, maroon or as subtle discolouration.
A  B 	C 	D 
Eschar	**Exudate**	**Friable tissue**
Hard, necrotic, devitalised tissue that appears black or brown, may be dry, leathery, soft and loosely or firmly attached. It indicates full-thickness tissue death. In dark skin tones, colour contrast may be reduced — assess alongside texture and wound history to confirm tissue viability.	Fluid released from tissue due to inflammation, injury or infection. Contains proteins, fibrin, white blood cells and serum (IWII, 2022). Helpful for moist wound healing but excess may cause maceration. Characteristics vary with wound type, healing stage and microbial presence [Table 3].	Delicate, fragile tissue that bleeds easily when touched. Appears moist, red or pink and may feel soft or spongy on examination. May result from infection, inflammation or prolonged moisture exposure. Often indicates poor wound healing or infection risk.
E 	F 	G 

Table 2. Terminology for clinical description of wound presentation and appearance. *(Continued)*

Granulation tissue	Hypergranulation tissue	Maceration
Fills the wound bed during healing and is rich in new blood vessels and fibroblasts. Appears moist, red or deep pink with a shiny, irregular surface. In dark skin tones, it may range from dark red to purple. Healthy granulation is essential for tissue regeneration.	Excessive growth of granulation tissue above or over wound edges. Appears raised, soft, spongy, red and often bleeds easily (IWII, 2022). May hinder epithelialisation and delay healing. In dark skin tones, it may range from dark red to purple.	Periwound skin that appears white, wrinkled or soft from prolonged moisture exposure. In dark skin tones, it may appear shiny, grey, purple or dark rather than pale. Managed by addressing moisture and selecting appropriate dressings.
H 	I 	J  K 
Pocketing	**Slough**	**Undermining**
Occurs when granulation tissue does not fill the wound uniformly, leading to hidden cavities or dead spaces beneath intact skin. These spaces can potentially harbour microorganisms (IWII, 2022) and delay healing. Assessment should include gentle probing. In all skin tones, pocketing may not be visible and require tactile evaluation.	Non-viable tissue seen in varying colours such as yellow, cream or grey, and may be stringy or moist. It indicates tissue breakdown and delays healing. The consistency depends on moisture and dressing type. In all skin tones, slough should be assessed by colour, texture and wound depth (Atkin, 2014; IWII, 2022).	Tissue destruction beneath intact skin at the wound margin, forming a shelf-like area. It differs from sinus tracts by affecting larger wound edges (EPUAP, NPIAP, PPPIA, 2019). Not always visible externally, it requires careful probing. In all skin tones, assessment relies on clinical examination rather than visual cues alone.
L 	M 	N 

These terms are commonly used during the wound assessment process. While some are more relevant to chronic/hard-to-heal wounds, it is essential that you are able to recognise and understand each term in clinical practice to support timely referral to the appropriate healthcare professional.

Images A, B, K, N courtesy of Professor Geoff Sussman; C, H, J courtesy of Lusi Sheehan; D, E, L, M courtesy of Queensland University of Technology; F courtesy of Fleur Trezise; G, I courtesy of Dr Dianne Smith

Table 3. Identifying different types of exudate (adapted from WUWHS, 2019).

Type	Colour/opacity	Consistency	Cause
Serous	Clear/amber/ straw-coloured	Thin, watery	Often a normal part of healing, but an increase or excessive amounts may indicate an underlying issue requiring reassessment
Haemorrhagic	Red, opaque	Thick	May indicate trauma to the wound or bacterial infection
Fibrinous	Cloudy	Thin, watery	Contains fibrin strands; may indicate inflammation (with or without infection)
Serosanguinous (haemoserous)	Clear, pink or light red	Thin, slightly thicker than water	Presence of red blood cells indicates capillary damage; may occur post-operatively or due to traumatic dressing removal
Sanguinous	Red	Thin, watery	Low protein content or presence of red blood cells indicating capillary damage; may be associated with hypergranulation
Seropurulent	Cloudy, yellow or tan	Thin, slightly thicker than water, creamy	Serous exudate containing pus; may indicate impending infection
Purulent	Opaque, milky, yellow, tan or brown; sometimes green	Often thick/sticky	Indicates infection; may be associated with malodour
Haemopurulent	Reddish, milky, opaque	Thick	Mixture of blood and pus; often due to established infection

The most common types of exudate in acute wounds are serous and haemorrhagic. However, it is essential that healthcare professionals are familiar with the full range of exudate descriptors, as accurate identification and documentation support appropriate management and timely referral to the relevant healthcare provider.

Importance of wound assessment

For individuals presenting with an acute wound, pharmacists are well positioned to assess individuals holistically. Their frequent and often informal interactions with individuals and carers, whether during initial consultations, product selection, routine reviews or follow-up conversations provide great opportunities to observe wound progression and identify when healing is not occurring as expected.

A structured approach to assessment supports sound clinical decision-making and appropriate referral. Queensland Health and the Royal Flying Doctor Service (2022) outline a practical framework for assessing acute wounds across three key components.

In addition to clinical observations, it is important to assess relevant social and practical factors, such as:

- Does the individual understand the information you are presenting to them related to their wound management?
- Are they engaged in shared goal setting (e.g. keeping the dressing dry)?
- Do they have the means to purchase recommended dressings?
- Are they likely to engage with the treatment plan?

Being able to recognise early signs of infection or delayed healing is essential to safe and effective acute wound care. While pharmacists are responsible for providing appropriate first-line management and support for acute wounds, they must also be equipped with the clinical awareness and confidence to escalate care when necessary.

Wounds that appear to be deviating from the expected healing trajectory, despite receiving optimal, evidence-based care, should be referred to a healthcare professional with specialist wound care expertise to facilitate the best possible clinical outcome for the individual (Shamsian, 2021; Wounds UK, 2022).

Applying the TIME(S) framework

While originally developed for managing chronic wounds, the TIME(S) framework (Wounds UK, 2016) remains a practical

3 key components of a structured wound assessment

Step 1. History taking

- **Mechanism of injury:** blunt, penetrating, burn, bite or other relevant causes
- **Time of injury:** hours since injury, important for wound closure options and infection risk
- **Contamination source:** soil, water, foreign bodies or other relevant materials
- **Blood loss:** estimate volume, particularly important for children or vascular injuries
- **Tetanus immunisation status:** confirm status, update if indicated
- Medications [see Box 1, page 8]
- Comorbidities [see Box 2, page 9].

Step 2. Visual and physical examination

- **Wound size and location:** record length, width, depth; note anatomical structures involved
- **Wound bed characteristics:** such as granulation tissue, slough, necrosis [see Table 2, pages 13–14]
- **Wound edge condition:** such as clean-cut, ragged, rolled, undermined
- **Presence of foreign bodies or exposed structures:** such as bone, tendon, vessel
- **Bleeding status:** active, controlled or absent
- **Signs of infection:** such as erythema, warmth, pus, malodour, systemic involvement.

Step 3. Functional assessment

- **Neurovascular status:** test sensation, motor function, and distal pulses
- **Pain assessment:** document intensity, timing (rest vs movement) and triggers; consider analgesic needs.

Importance of wound assessment *(Continued)*

Table 4. Principles of TIME(S), their effects and possible clinical actions to improve wound bed and promote healing.

TIME(S) Domain	What to observe	Pharmacist action	When to refer
Tissue	Viable, non-viable or unhealthy tissue (e.g. slough, necrotic tissue).	■ Identify non-viable tissue ■ Recommend appropriate non-adherent or absorptive dressings to protect wound and minimise trauma.	If devitalised tissue is present, debridement may be required and should be performed by a qualified healthcare professional.
Inflammation/ Infection	Signs of infection (e.g. pain, erythema, redness, heat, swelling, excessive exudate).	■ Assess for local infection ■ Recommend suitable antimicrobial dressings (e.g. iodine, silver, honey-based) ■ Educate on signs of deterioration.	If infection worsens, spreads or does not improve.
Moisture balance	Excessive or insufficient exudate levels, thickened/rolled or macerated wound edges	■ Select dressings to manage moisture (e.g. absorbent for moderate- to high-exuding wounds or hydrogels for dry wounds) ■ Ensure correct dressing change frequency.	If exudate is heavy, persistent, malodorous, or associated with skin breakdown.
Edge of wound	Rolled, thickened, undermined macerated or non-advancing edges.	■ Observe for stalled healing ■ Reinforce wound hygiene, appropriate dressing size and exudate control ■ Check for dressing adherence.	If edges are deteriorating or wound shows no improvement.
Surrounding skin	Condition of periwound area (4cm) and surrounding skin (20cm; **Figure 5**).	■ Recommend barrier creams, protective films or emollients to maintain periwound skin integrity ■ Advise on dressing selection to reduce excess moisture.	If surrounding skin becomes inflamed, broken or vulnerable to further damage.

guide for observing and describing acute wounds, especially in terms of identifying potential complications or delays in healing. Pharmacists are not expected to carry out all clinical actions (e.g. debridement, biopsies), but understanding the framework can help guide clinical conversations, dressing selection and referrals.

See **Table 4** for more information about each principle, their effects and potential actions that can be taken to improve the wound.

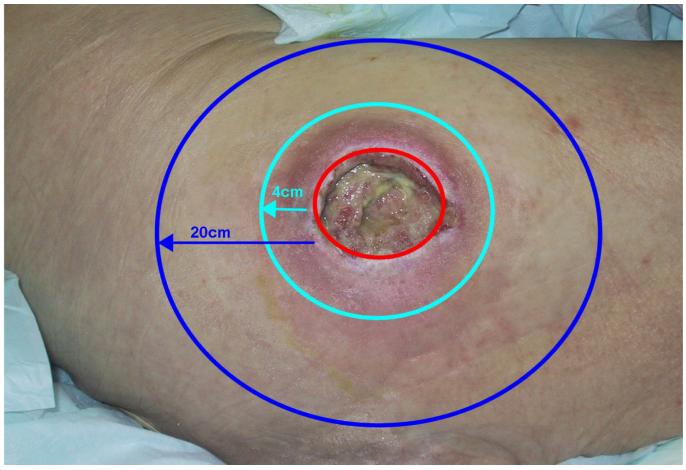


Figure 5. *The wound area is divided into 3 zones. Zone 1 (red): wound bed and wound edge; Zone 2 (light blue): periwound approximately 4cm from wound edge; Zone 3 (blue): surrounding skin zone approximately 20cm from wound edge (Image courtesy of Kimberly LeBlanc; IWII, 2025).*

Identifying infection

MYTH

Only large or dirty wounds are at risk of infection.

TRUTH

Many acute wounds, even small cuts, punctures or animal bites can be tetanus-prone. All wounds should be triaged for tetanus risk, and vaccination status should be reviewed to guide appropriate management.

While infection and inflammation may share some overlapping clinical features, careful assessment of signs, symptoms, timing, wound appearance, microbiological analysis, response to treatment and clinical judgement can help differentiate between the two conditions and guide appropriate management strategies.

Wound infection is when the quantity of microorganisms in a wound becomes imbalanced, the host response is overwhelmed and wound healing becomes impaired (Swanson et al, 2015; Ousey et al, 2022). The transition from non-infected to infected is a gradual process determined by the quantity and virulence of microbial burden and the individuals immune response (IWII, 2022).

The IWII (2022) continuum **[Figure 6]** illustrates the various stages to be aware of when assessing for wound infection:

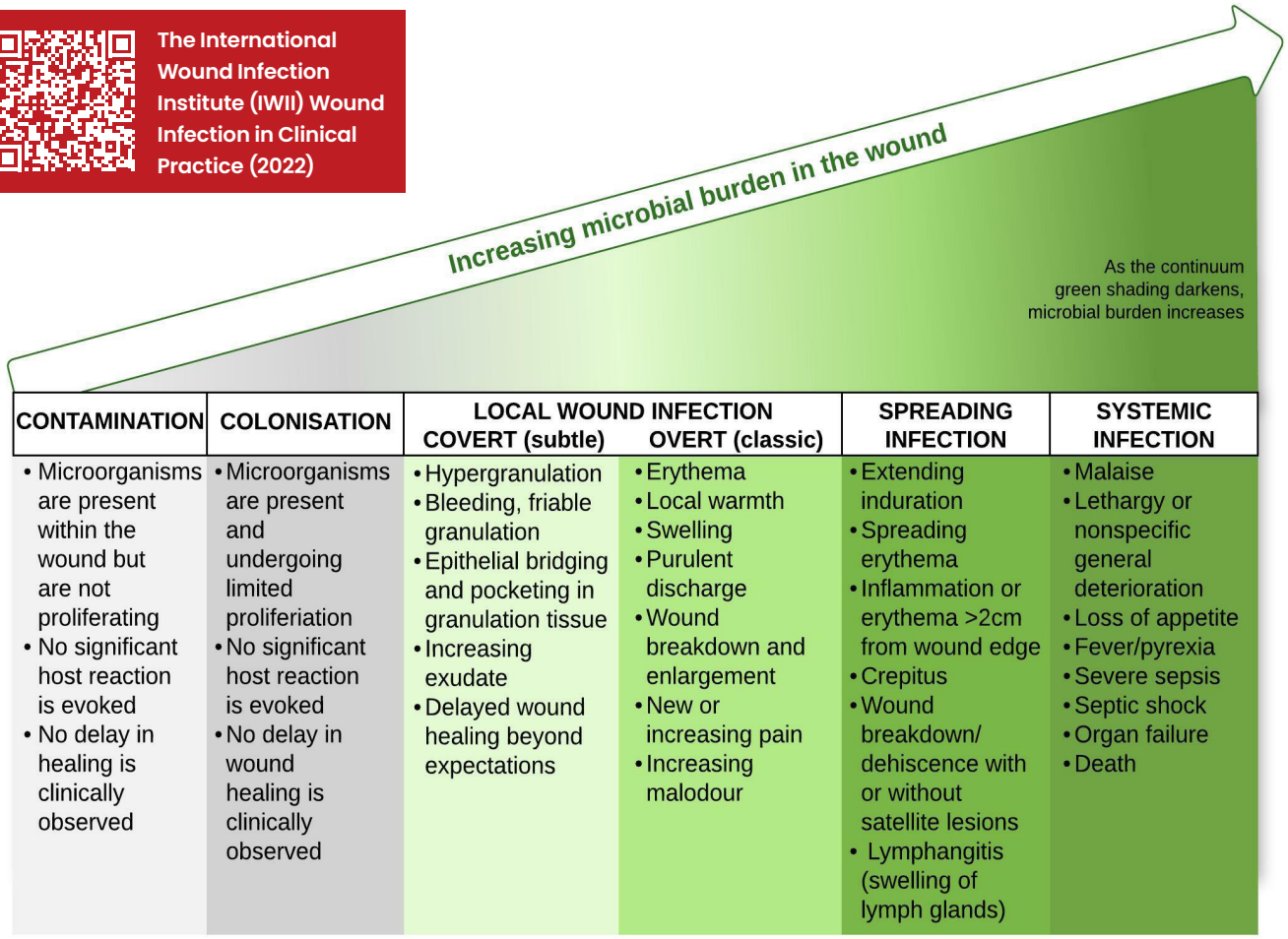
- **Contamination** where microorganisms from the normal flora of the periwound skin may enter the wound. However, bacterial levels remain low, do not multiply significantly and do not trigger a notable immune response or hinder healing. At this stage, healthy red granulation tissue or pink epithelial tissue may be visible
- **Colonisation** where bacteria reproduce at a controlled rate without causing a substantial immune response or impairing wound healing. During this phase, red granulation tissue may be present, accompanied by mild inflammation and clear exudate
- **Local infection** when bacterial colonisation progresses, with microorganisms multiplying and penetrating deeper into the wound tissue. This triggers a host immune response, leading to visible signs of infection and impaired healing. Local infection is confined to the wound and immediate periwound area (less than 2cm) and may begin with covert (subtle) signs and symptoms
- **Spreading infection** occurs when the infection extends beyond the wound border, typically affecting deeper tissues, muscles and even organs. This spread often exceeds 2cm from the wound bed. Common signs and symptoms include increasing erythema, wound deterioration, induration, fatigue or lethargy, loss of appetite and inflammation or swelling of the lymph nodes
- **Systemic infection** occurs when the impact of the wound infection proliferates throughout the whole body via the vascular or lymphatic system (systemic).

Clinical signs and symptoms of wound infection (adapted from IWII, 2022)

Overt (classic)	Covert (subtle)	Systemic infection
■ Erythema (which may present differently depending on individual skin tone) ■ Local warmth ■ Swelling, induration ■ Purulent discharge ■ Wound breakdown ■ Malodour ■ New or increasing pain ■ Wound breakdown and enlargement.	■ Hypergranulation ■ Bleeding, friable granulation ■ Epithelial bridging and pocketing in granulation tissue ■ Increasing exudate ■ Delayed wound healing beyond expectations.	■ Fever/pyrexia ■ Malaise ■ Rigors ■ Chills ■ Severe sepsis ■ Loss of appetite ■ Septic shock ■ Hypotension ■ Multiple organ failure.

Identifying infection *(Continued)*

The International Wound Infection Institute (IWII) Wound Infection in Clinical Practice (2022)



CONTAMINATION	COLONISATION	LOCAL WOUND INFECTION COVERT (subtle)	LOCAL WOUND INFECTION OVERT (classic)	SPREADING INFECTION	SYSTEMIC INFECTION
• Microorganisms are present within the wound but are not proliferating • No significant host reaction is evoked • No delay in healing is clinically observed	• Microorganisms are present and undergoing limited proliferiation • No significant host reaction is evoked • No delay in wound healing is clinically observed	• Hypergranulation • Bleeding, friable granulation • Epithelial bridging and pocketing in granulation tissue • Increasing exudate • Delayed wound healing beyond expectations	• Erythema • Local warmth • Swelling • Purulent discharge • Wound breakdown and enlargement • New or increasing pain • Increasing malodour	• Extending induration • Spreading erythema • Inflammation or erythema >2cm from wound edge • Crepitus • Wound breakdown/ dehiscence with or without satellite lesions • Lymphangitis (swelling of lymph glands)	• Malaise • Lethargy or nonspecific general deterioration • Loss of appetite • Fever/pyrexia • Severe sepsis • Septic shock • Organ failure • Death

Figure 6. *The International Wound Infection Institute Continuum (IWII, 2022)*

Wound cleansing

MYTH

Antiseptics should be applied to all wounds as part of standard care.

TRUTH

Clean wounds typically do not require antiseptics — thorough cleaning with water and a suitable surfactant is usually sufficient. Antiseptics may be appropriate for heavily contaminated wounds but should be used according to product instructions and thoroughly rinsed to avoid damage to healing tissue.

MYTH

Betadine does not need to be rinsed off when applied to an acute wound.

TRUTH

Betadine should generally be rinsed off wounds to minimise tissue damage. When used as a skin preparation on intact skin before a procedure, it may be left in place.

According to the IWII (2025), a wound dressing procedure typically involves cleansing, debriding, assessing the wound and applying a new dressing to protect the wound, promote healing and manage or prevent infection. Additional steps may include applying topical agents to aid healing or taking a wound swab for microscopy, culture and sensitivity testing. While pharmacists are unlikely to perform wound swabbing, timely referral to an appropriate healthcare professional is essential if infection is suspected.

Wound cleansing

Cleansing is a crucial step in wound care and should be performed after the wound bed has been assessed. A variety of wound cleansing solutions are available (IWII, 2025), each with different purposes and properties:

Inert substances

Examples: Sterile saline, sterile water, potable tap water

These solutions do not contain active chemical ingredients, nor do they assist in loosening debris or removing non-viable tissue. Additionally, they lack antimicrobial properties to prevent and treat microbial burden. Instead, they act as neutral rinsing agents that do not interfere with the healing process. Therefore, these options are generally not appropriate for wounds with heavy debris or signs and symptoms of local wound infection. They may be used for cleansing a healthy wound without visible contamination and for cleaning the surrounding skin. The use of potable (non-sterile) tap water remains debated due to the potential risk of contamination.

Antiseptics

Examples: Acetic acid, aluminium acetate, hypochlorous acid, octenidine dihydrochloride (OCT), povidone-iodine

Antiseptics, also known as antimicrobial solutions, help prevent and treat infections caused by bacteria, fungi, viruses and protozoa. According to IWII (2025), antiseptics are effective in preventing and managing wound infections and biofilms, particularly when used in combination with debridement and antimicrobial dressings.

If a wound is not infected or at risk of infection, the use of antiseptics is generally unnecessary. Although the risk of bacterial resistance is lower with antiseptics compared to topical or systemic antibiotics, their cautious and appropriate use remains an important aspect of antimicrobial stewardship (AMS).

Surfactants

Examples: Betaine

Surfactants are chemical agents added to wound cleansing solutions to reduce surface tension. This allows the solution to spread more easily over the wound, helping to loosen and lift dirt, dead tissue and other debris from the wound bed.

Even when not combined with antimicrobials, surfactants appear to reduce the adherence of microbes, impeding their attachment to the wound bed and potentially reducing their ability to form biofilm (Bellingeri et al, 2016; Percival et al, 2018).

Combination solutions

Examples: OCT, polyhexamethylene biguanide (PHMB)

Combination solutions incorporate both surfactants and antiseptics to enhance wound cleansing while providing antimicrobial protection. Surfactants help reduce surface tension, allowing for better removal of debris and biofilm, while antiseptics actively slow or stop the growth of microorganisms to prevent infection. This dual action makes them especially useful in wounds with a high risk of infection or persistent biofilm.

Table 5 presents the key considerations when selecting a wound cleansing solution.

Best Practice Statement:
The wound should be irrigated (e.g. flushed with a cleansing solution using gentle, steady pressure) rather than wiped during the cleansing procedure.

Wound cleansing *(Continued)*

Table 5. Key considerations when selecting a wound cleansing solution in acute wound management (adapted from the IWII, 2025).

Consideration	Guidance
Procedure type and cleansing method	■ Use sterile solutions when performing a sterile or surgical aseptic technique (e.g. post-operative wound care) ■ Choose a cleansing solution that is easy to use in the pharmacy or home setting and is available in appropriate volumes
Wound presentation	■ When healthy granulation and epithelial tissue is predominant, an inert solution (e.g. normal saline) may be all that is required ■ For wounds with visible debris, slough or signs of contamination, consider using a surfactant-containing solution. Exception: dry necrotic tissue on heels where the goal of care is to protect
Infection risk or presence	■ If signs of local infection are present (e.g. redness, warmth, malodour, increased pain), use an antiseptic cleansing solution ■ For wounds in high-risk individuals (e.g. people with diabetes, immunosuppression, or wounds in high-contamination areas), antiseptics may help reduce infection risk
Known or suspected microorganisms	■ While specific microbiological identification is uncommon in pharmacy practice, consider local patterns of resistance or known sensitivities if shared by the prescriber
Allergies and tolerability	■ Always check for known allergies (e.g. iodine sensitivity, chlorhexidine reactions) ■ If the individual reports pain or stinging during cleansing, consider switching to a gentler, non-irritating solution
Product safety and pH	■ Review the product's safety profile and recommended contact time ■ Some antiseptics (e.g. hypochlorous acid) can help maintain an optimal wound bed pH, promoting healing
Individual needs and goals of care	■ Consider whether the goal is to promote healing, prevent infection, or provide palliative management ■ A non-sterile solution might be selected for palliative management of a wound with no concerning signs or symptoms ■ If the wound has purulent exudate and/or malodour, consider using an antiseptic solution ■ Some individuals experience pain or discomfort with some cleansing solutions. If pain occurs, consider reviewing the cleansing solution
Time and setting	■ Choose solutions with easy application and minimal required contact time, especially in time-limited pharmacy consultations
Availability and cost	■ Recommend products that are readily available in the pharmacy and affordable for the individual ■ Follow local formulary guidance or clinical protocols where applicable

Best Practice Statement:

All cleansing solutions should be warmed prior to use to help maintain the surface temperature of the wound.

Antimicrobial resistance and antimicrobial stewardship

MYTH

All wounds require antibiotics.

TRUTH

Most wounds do not require antibiotics. In many cases, antiseptics and appropriate dressings are sufficient. Antibiotics should only be used when there is clear evidence and confirmation of infection.

Role of antibiotics in wound healing

Antibiotics support wound healing by treating infection, but they do not directly heal wounds, as not all wounds are infected (de Souza et al, 2014). All open wounds harbour microorganisms; however, colonisation, the replication of bacteria without tissue invasion or damage, does not warrant antibiotic use. Inappropriate antibiotic use can be harmful, weakening wound tensile strength and interfering with collagen cross-linking (Kanoh and Rubin, 2010).

Inflamed but non-infected wounds may respond to conservative management such as cleansing, debridement and topical therapies aimed at reducing inflammation (Dhoonmoon and Edwards-Jones, 2024).

Topical antibiotics

Antibiotics target specific sites within bacterial cells while having minimal influence on human cells; therefore, they generally have low toxicity (Dumville et al, 2017). They may be administered either topically or systemically to manage wound infection. Topical preparations can include gels, creams or impregnated dressings.

However, the use of topical antibiotics, which often contain a low-dose form of antibiotic, may contribute to antimicrobial resistance (AMR). Controversy surrounds their use, and the debate is compounded by growing research on the wound microbiota and limited clinical evidence supporting efficacy (Chaplin, 2020; IWII, 2022).

A review of clinical studies comparing topical antibiotics with antiseptics for preventing infection in uncomplicated wounds found a lower relative risk of infection with topical antibiotics; however, there was no significant difference in absolute risk reduction (Tong et al, 2018, IWII, 2022).

Given the global concern regarding antibiotic resistance, use of topical antibiotics for wound management should only be considered in infected wounds under very specific circumstances by experienced clinicians (Wolcott, 2015; Tong et al, 2018, IWII, 2022).

Antimicrobial resistance (AMR)

The World Health Organization (2019) recognises AMR, the reduced efficacy of antivirals, antifungals, antibacterials and antiparasitics, as a global health crisis. AMR occurs when infectious organisms adapt to survive treatment, a natural biological process intensified by factors including medicine misuse and poor infection control.

In wound care, antimicrobial overuse is a significant concern. Lipsky et al (2016) highlighted global studies showing that 80% of antibiotic courses and 20% of all antibiotics are prescribed in community or ambulatory settings. In the UK, Guest et al (2020) found that half of all community-managed wounds receive at least one antibiotic course annually. Reducing AMR is therefore a shared responsibility across all healthcare providers.

The role of pharmacists in antimicrobial stewardship (AMS)

Pharmacists are ideally positioned to serve as guardians of responsible antimicrobial prescribing, frequently acting as the first point of contact for individuals in the community seeking advice on wounds, respiratory infections and other health concerns. They also provide expert guidance to other healthcare professionals on appropriate antimicrobial use.

Pharmacy teams play a vital role in promoting AMS, which aims to optimise prescribing, reduce inappropriate use, minimise adverse effects (e.g. toxicity, resistance), and lower the economic burden. When there are no clinical signs of infection, topical antimicrobials or antimicrobial dressings are not required, unless used prophylactically for at-risk wounds or individuals (Lipsky et al, 2020).

Despite their central role in dispensing antimicrobials, pharmacists are often overlooked in stewardship programmes. Their involvement is essential, as they are tasked with recommending suitable alternatives when appropriate and ensuring that antimicrobials are prescribed only for the necessary duration prior to a medication review (Ousey and Sussman, 2021).

Antimicrobial resistance and antimicrobial stewardship *(Continued)*

Table 6 outlines AMS strategies at governmental, organisational and clinical levels aimed at ensuring responsible antimicrobial use in wound care (Rippon et al, 2021).

Table 6. Antimicrobial stewardship initiatives (IWII, 2022).

Government level AMS initiatives
■ Promote global regulation of prescription and supply of antimicrobials ■ Support global initiatives focussed on reducing antimicrobial resistance ■ Promote awareness of antimicrobial resistance in the health and animal sectors and the general public ■ Support and stimulate ongoing research on antimicrobial resistance and development of new antimicrobial agents.
Organisational level AMS initiatives
■ Provide adequate funding and resources to support AMS ■ Convene an AMS committee responsible for guiding and monitoring the use of antimicrobial agents in the facility ■ Develop institutional policies and procedures on the use of antimicrobial agents based on global guidance ■ Implement best clinical practice in wound infection prevention and treatment ■ Facilitate accurate diagnosis of wound infection with appropriate policies, resources and care pathways ■ Monitor trends in microbial sensitives in the facility ■ Audit antimicrobial prescribing and patterns of use ■ Monitor and publish incidence of wound infection, types of wounds being managed with antimicrobial agents and their effectiveness ■ Provide regular education to all stakeholders on antimicrobial resistance and AMS.
Clinical level AMS initiatives
■ Educate individuals, their families and healthcare professionals regarding antimicrobial resistance and responsible use of antimicrobial agents ■ Avoid use of antimicrobials as prophylactic therapy, except for wounds identified at high risk of infection ■ Use non-medicated options (e.g. non-medicated wound dressings) to manage infection when possible ■ Only use antimicrobials when a wound has been clinically identified as infected ■ Base antimicrobial selection on identification of the infecting organisms ■ Select antimicrobial agents with narrow-spectrum activity where possible ■ Reserve broad-spectrum agents for more resistant bacterial infections where possible ■ Continue the use of antimicrobial therapy for an appropriate duration to prevent development of resistance ■ Monitor therapeutic response to guide ongoing selection and use of antimicrobials.

Dressing selection and application

MYTH

Pharmacists are unable to dress wounds.

TRUTH

Trained pharmacists advise on dressing selection, application techniques, infection prevention and patient education. Their role is recognised, though direct dressing may depend on local protocols.

Wound dressings support the healing process by creating an optimal wound environment. Depending on the product, dressings may help remove devitalised tissue, maintain a warm, moist environment, manage exudate, reduce bacterial burden (Alberts et al, 2025), and, in some cases, assist with autolytic debridement.

Best Practice Statement:
Understanding the function of different dressing types empowers pharmacists to select products based on wound assessment, not habit or availability.

Types of dressings

Dressings vary from simple gauze to advanced foams, hydrogels, films and combination products. While some dressings are primarily used for chronic wounds, pharmacists managing acute wounds should still be aware of these products, particularly in transitional care settings or when wounds are at risk of delayed healing.

Dressings are typically categorised as either primary or secondary. For the purpose of this BPS:

- **Primary dressings** are placed in direct contact with the wound surface
- **Secondary dressings** cover and secure the primary dressing and may perform additional functions, such as absorbing excess exudate or protecting the periwound skin.

Best Practice Statement:
Pharmacists are not expected to know every dressing available, but they should understand how to select dressings based on wound characteristics and know where to access formulary or product guidance.

See **Table 7** for a summary of commonly used dressings and their typical indications.

Factors influencing dressing selection

Dressing selection should follow a structured wound assessment **[page 16]**, tailored to the wound's presentation and patient-specific needs. See **page 25** for factors influencing dressing selection.

Promoting undisturbed wound healing

An important goal in managing acute wounds is to minimise unnecessary disturbance to the wound site. This principle, referred to as undisturbed wound healing, involves leaving dressings in place for as long as clinically appropriate. Typically, dressings are left until they become saturated, lose adherence or are otherwise compromised.

For suitable individuals and under the guidance of a qualified wound care practitioner, extended dressing wear time may offer several advantages, provided exudate levels are appropriately managed:

- Enhanced wound healing by minimising disruption to the wound, unless specific circumstances require intervention
- Reduced clinician time on dressing changes by at least 29% (Stephen-Haynes, et al, 2013; Simon and Bielby, 2014; Joy et al, 2015; Krönert et al, 2016; Tiscar-González et al, 2021)
- Decreased risk of contamination and infection, helping to maintain a clean healing environment
- Improved resource use and reduced cost (Brindle and Farmer, 2019).

Best Practice Statement:
Dressing changes can be extended to every 5–7 days when appropriate for the wound, individual and dressing type (Brindle and Farmer, 2019).

Dressing selection and application *(Continued)*

Factors influencing dressing selection

WOUND CHARACTERISTICS

- **Type and aetiology:** e.g. abrasion, skin tear, burn
- **Wound bed appearance**: e.g. granulating, epithelialising, sloughy, necrotic, bleeding
- **Exudate level:** Match absorbency to exudate level (low, moderate, heavy) to maintain moisture balance and prevent maceration
- **Depth and size:** Deeper or cavity wounds may require packing or layered dressings

CLINICAL RISKS

- **Presence or risk of infection:** Select dressings that minimise infection risk; use antimicrobials only when clinically indicated
- **Bleeding risk**

TREATMENT GOALS

- e.g. promote healing, manage exudate, reduce bioburden

ENVIRONMENTAL CONSIDERATIONS

- **Temperature and humidity:** Hot or humid conditions can increase moisture around the wound, increasing the risk of maceration. Dressings should manage exudate effectively and maintain a balanced microclimate
- **Contamination risk:** Wounds exposed to dirt, sweat or other contaminants may require dressings with barrier properties or antimicrobial activity

ANATOMICAL CONSIDERATIONS

- **Location of the wound:** Areas such as heels, joints (knees, elbows) and interdigital spaces are prone to movement, friction and pressure. Dressings must remain secure without slipping
- **Contour and depth:** Irregularly shaped or deep wounds may require specialised dressings conform closely, fill cavities and maintain contact with the wound bed.
- **Skin type and fragility:** Areas with thin or delicate skin need gentle dressings to prevent additional trauma during dressing changes
- **Pressure-prone areas:** For wounds on bony prominences, choose dressings that help redistribute pressure and protect surrounding tissue from shear or friction

PATIENT CONSIDERATIONS

- **Mobility and ability to self-care:** Choose dressings that suit the patient's activity level and ability to change or manage dressings independently
- **Activity level of the patient:** Active patients may need flexible or more durable dressings that remain secure during movement
- **Pain:** Select options that minimise discomfort during wear and removal (e.g. atraumatic adhesives, non-adherent layers or extended wear times)
- **Engagement and comfort:** Dressings should be comfortable, discreet and easy to use to encourage adherence
- **Odour:** Consider dressings that control malodour

COST AND AVAILABILITY

- The cheapest product may not be the most cost-effective long term. Consider the overall cost of wound management, including healing outcomes, frequency of dressing changes and product performance.

When undisturbed wound healing is not appropriate

Undisturbed wound healing is not appropriate for every type of wound, particularly if

- Exudate levels are high and cause strikethrough or leakage
- Frequent wound inspection is needed (e.g. post-operative wounds with signs of infection; Morgan-Jones et al, 2019)
- The dressing becomes detached
- Maceration develops.

Pharmacists supporting self-care and undisturbed wound healing

Pharmacists play a key role in educating individuals on the safe, effective use of dressings between clinical visits. While pharmacists may apply or supervise dressing changes in some settings, most acute wounds will eventually be self-managed by individuals or carers. Therefore, patient understanding of dressing application, maintenance and removal is critical.

See **Box 3** for an overview of correct dressing application and removal techniques.

Signs a dressing change is needed

Pharmacists should also ensure that individuals are equipped to recognise these key signs that a dressing change is necessary:

- Dressing saturation or visible strikethrough
- Leakage of wound fluid
- Excessive or fresh bleeding
- Maceration of surrounding skin
- Signs of local infection (e.g. pain, redness, swelling, odour)
- Wound deterioration
- Loss of dressing adherence (e.g. peeling or detachment)
- Increased wound pain
- Local irritation or pruritus.

Box 3. Correct dressing application and removal techniques.

Correct dressing application

- Ensure the wound and periwound area are fully dry before applying
- Position dressing in a way that does not restrict patient movement
- Do **NOT** apply tension or stretch the dressing
- Use firm but gentle pressure to smooth the adhesive product, ensuring there are no gaps or wrinkles that could compromise adhesion, cause dehydration or allow contamination to enter
- Always refer to the manufacturer's instructions.

Correct dressing removal

- Loosen edges of the dressing first
- Take the time to peel the dressing in the direction of hair growth, while supporting the surrounding skin with their free hand ('low and slow' approach; Fumarola et al, 2020)
- With adhesive dressings, consider using medical adhesive removers to reduce pain and skin stripping by softening and dissolving adhesive bonds and edges.

Dressing selection and application *(Continued)*

Table 7. Wound dressings properties, uses and precautions (adapted from Sussman, 2023).

Product classification	Properties	Indications	Precautions
Contact layer dressings (silicone contact layers and tulles): Thin, non-adherent sheets that sit directly on the wound to protect tissue and reduce pain during dressing changes			
Silicone contact layer	■ Soft silicone mesh ■ Gentle on fragile skin	■ Elderly or fragile skin ■ Superficial wounds ■ Post-operative incisions	■ Check for silicone sensitivity or allergy
Tulle / paraffin gauze	■ Cotton/synthetic mesh impregnated with soft paraffin (sometimes antiseptic agents) ■ Must be finely and tightly meshed to avoid adherence	■ Minor burns ■ Superficial wounds ■ Donor sites	■ Outdated and not recommended ■ Can stick if mesh is too wide ■ May cause maceration in highly exuding wound
Non-adherent dressings: Simple dressings that do not adhere to the wound but offer minimal absorption. Must be secured in place (e.g. with bandage, tape, or fixation device)			
High-absorbency non-adherent	■ Contain highly absorbent polymers	■ Moderate- to high-exuding wounds	■ Not suitable for dry or low-exuding wounds
Film dressings: Thin polyurethane sheets that allow the passage of moisture vapour and oxygen but are impermeable to water and microorganisms			
Film dressings (transparent or island)	■ Polyurethane film with adhesive backing ■ Island dressings include thin, low-absorbent pad ■ Moisture control ■ Waterproof and bacterial barrier ■ Protects skin at risk from friction or maceration ■ Allows wound observation (except island dressings with an absorbent centre)	■ Superficial, low-exuding wounds (film island dressings) ■ Clean, granulating or epithelialising wounds (film island dressings) ■ Post-operative wounds and minor injuries ■ To retain a primary dressing	■ Not suitable for fragile or compromised surrounding skin ■ Not suitable for deep, infected or moderate- to highly exuding wounds ■ Fluid accumulation under the dressing may cause maceration
Hydrocolloid dressings: Absorb exudate and form a gel that promotes autolytic debridement (the body's natural wound-cleaning process)			
Hydrocolloid dressings	■ Promotes autolytic debridement	■ Clean, low- to moderate-exuding wounds ■ Granulating wounds	■ Not suitable for dry, necrotic or highly exuding wounds ■ May encourage hypergranulation ■ Risk of maceration ■ May produce an odour upon removal (this is normal and typically resolves after cleansing)
Foam dressings: Soft, absorbent dressings that protect and cushion wounds while managing exudate			
Standard polyurethane foam	■ Absorbs fluid ■ Maintains moisture balance ■ Conforms to the wound bed ■ Provides thermal insulation ■ Offers cushioning	■ Light foams: Suitable for low- to moderate-exuding wounds ■ Standard foams (e.g. 5-layer): Suitable for moderate- to high-exuding wounds	■ Not suitable as a primary dressing for low-exuding wounds ■ Avoid use on infected wounds unless used alongside appropriate antimicrobial management ■ Monitor for maceration in highly exuding wounds

Table 7. Wound dressings properties, uses and precautions (adapted from Sussman, 2023). *(Continued)*

Product classification	Properties	Indications	Precautions
Soft silicone-coated polyurethane foam	■ Non-adherent ■ Gentle removal	■ Fragile skin ■ Moderate- to high-exuding wounds ■ Pressure redistribution (minor degree) ■ Available in low- to non-adherent forms for delicate skin ■ Available in "lite" versions (2–3 layer foams) for low-exuding wounds	■ Consider silicone sensitivity or allergy
Hypoactive dressings: Similar to foams but interact with exudate to form a gel-like structure			
Hydroactive dressings	■ Absorbs fluid ■ Moisture control ■ Conforms to the wound bed	■ Moderate- to high-exuding wounds ■ Suitable for cavity wounds ■ Low-adherent options for fragile skin	■ Not suitable for dry, necrotic or low-exuding wounds
Alginate dressings (brown seaweed derived alginic acids)	■ Fluid absorption ■ Promote autolytic debridement ■ Moisture control ■ Conforms to the wound bed ■ Some products are haemostatic	■ Moderate- to high-exuding wounds ■ Available in rope form for cavity wounds ■ Silver-containing versions for antimicrobial effect	■ Not suitable for dry or necrotic wounds ■ Use with caution on friable tissue (risk of bleeding) ■ Do not tightly pack cavity wounds
Hydrogel dressings: Water-based gels used to hydrate dry wounds and support gentle debridement			
Amorphous gel (unstructured) **Hydrogel sheet (structured)**	■ Rehydrates wound bed ■ Moisture control ■ Promotes autolytic debridement ■ Cooling and pain relief ■ Available in various formats (e.g. sterile gels for wounds and preserved gels for skin); ensure sterile products are used for open wounds	■ Dry and low- to moderate-exuding wounds ■ Superficial burns	■ Not suitable for high-exuding wounds (risk of periwound maceration) ■ Avoid use if anaerobic infection is suspected
Antimicrobial dressings: Reduce or manage microbial load in wounds, particularly when there is critical colonisation or clinical signs of infection. These incorporate agents such as iodine, silver, polyhexamethylene biguanide (PHMB) or dialkylcarbamoyl chloride (DACC) that have broad-spectrum antimicrobial activity			
Cadexomer iodine	■ Slow, sustained iodine release ■ Broad-spectrum (bacteria, fungi, protozoa, viruses) ■ Promotes autolytic debridement ■ Absorbs exudate ■ Promotes healing	■ Critically colonised or infected wounds ■ Sloughy, moderate- to high-exuding wounds	■ Check for iodine sensitivity ■ Short-term use recommended (≤3 months) ■ Monitor for signs of systemic absorption

Dressing selection and application *(Continued)*

Table 7. Wound dressings properties, uses and precautions (adapted from Sussman, 2023). *(Continued)*

Product classification	Properties	Indications	Precautions
Antimicrobial dressings: Reduce or manage microbial load in wounds, particularly when there is critical colonisation or clinical signs of infection. These incorporate agents such as iodine, silver, polyhexamethylene biguanide (PHMB) or dialkylcarbamoyl chloride (DACC) that have broad-spectrum antimicrobial activity			
Povidone iodine	■ Rapid-release iodine ■ Broad-spectrum antimicrobial ■ Minimal or no debriding activity	■ Superficial, infected wounds ■ Pre-surgical or acute wound antisepsis (short-term)	■ Not recommended for deep wounds or prolonged use ■ May delay healing if overused ■ Caution in thyroid disorders or renal impairment
Silver-based (elemental, nanocrystalline)	■ Broad antimicrobial coverage ■ Effective against bacteria, fungi and viruses ■ Available in foams, alginates, CMC formats for exudate absorption	■ Critically colonised or infected wounds ■ Low- to high-exuding wounds.	■ May cause skin discolouration ■ Check for silver sensitivity ■ Reassess if no improvement after 2 weeks ■ Incompatible with saline (chloride ions inactivate silver ions)
PHMB	■ Newer non-toxic products ■ Active against bacteria (e.g. MRSA, biofilm), fungi, viruses	■ Sloughy wounds ■ Low- to moderate-exuding wounds with infection	■ Do not use on clean, granulating wounds
DACC	■ Physically binds and removes microbes (e.g. MRSA, VRE, biofilm, fungi) ■ No cytotoxicity	■ Colonised or critically colonised wounds	■ Generally safe and well-tolerated
Enzymatic alginate gel	■ Antibacterial ■ Breaks down slough ■ Supports debridement	■ Sloughy wounds with moderate exudate	■ Follow product-specific instructions carefully

Some dressings listed in the table may not be suitable for acute wounds or are outdated, but they may still be encountered in some settings. Pharmacists should be aware of their limitations:

- Non-paraffin tulle/basic non-adherent pads: Can dry out the wound if left in place too long; lack absorbency and are only suitable for superficial, non-exuding wounds
- Hydrocolloid dressings: Primarily designed for chronic wounds, but may occasionally be used on clean acute wounds
- Foam dressings: More commonly used for chronic or hard-to-heal wounds, but can support management of moderate- to high-exuding acute wounds
- Antimicrobial dressings: Should not be used routinely in acute wounds; only use when there are signs of critical colonisation or infection.

Important: The table outlines generic dressing types. Some products may contain additional components (e.g., antimicrobial agents. Always check the manufacturer's product information for specific details.

MYTH

A dressing needs to be changed every day.

TRUTH

Frequent dressing changes can disrupt healing and increase trauma. Advanced dressings are designed to maintain optimal moisture and should be changed only as needed, based on wound assessment.

Patient education and expectations

Educating individuals and managing expectations is not only vital for effective dressing use, it also supports broader wound care principles such as AMS. Pharmacists should explain:

- The purpose of dressings in promoting healing
- The importance of keeping dressings in place unless there is a clear reason for removal
- How to cleanse a wound properly
- The impact of good nutrition, hydration and hygiene on healing.

Pharmacists should also reinforce that antimicrobial dressings or agents are not routinely required unless there are clear signs of infection. If infection is suspected, particularly in immunocompromised individuals, patients should be referred promptly to a healthcare professional with relevant expertise.

Knowing when to refer

While it is the responsibility of the pharmacist to provide appropriate first-line management and support for minor wounds, it is equally important for them to be equipped with the clinical awareness and confidence to escalate care when necessary. Pharmacists should feel empowered to recognise when specialist input is required in order to safeguard patient outcomes and ensure timely intervention.

The expert panel acknowledged that referral decisions are influenced by the pharmacist's individual experience, their defined scope of practice and the nature and severity of the wound. Factors prompting referral may include:

- Size, depth and location of the wound
- Cause (e.g. chemical or electrical burns)
- Severity
- Age of the individual
- Presence/signs of infection.

Suitable referral pathways may include GPs, wound care nurses, podiatrists, dermatologists, surgeons or emergency services. The decision to escalate should be guided by the pharmacists defined scope of practice, clinical judgement and local protocols.

The future

As the scope of pharmacy practice continues to expand, community pharmacists are increasingly positioned to play a key role in wound care delivery. With the right training, tools and clinical support, pharmacists can contribute meaningfully to early intervention, ongoing wound management and patient education, particularly for individuals with acute wounds who may not regularly engage with other healthcare services.

Looking ahead, the integration of digital tools such as electronic documentation platforms, secure photo capture and clinical decision support systems will enhance pharmacists' ability to monitor wound progression, coordinate care and deliver safe, consistent treatment. Advances in wound dressing technologies, including long-wear, multi-functional products, also promise to streamline care and improve outcomes, provided that product selection remains rooted in clinical assessment and patient needs.

To ensure the continued evolution of pharmacist collaboration in wound care, investment in structured education, interprofessional collaboration and national guidance will be key. Ultimately, the future of wound care in pharmacy lies in combining practical know-how with evidence-based practice, so that all patients, regardless of where they present, can receive high-quality, timely care.

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