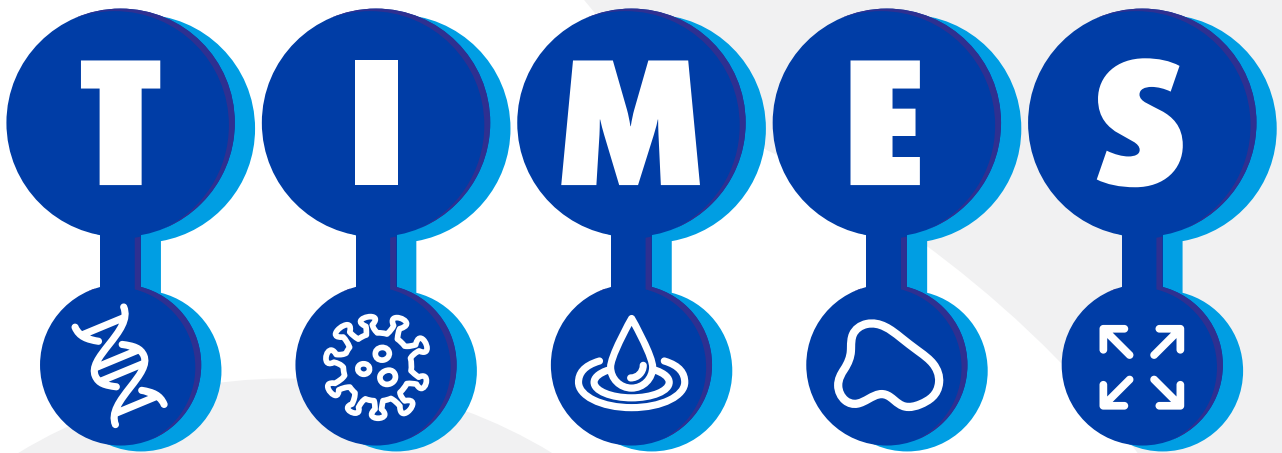


 Flaminal<sup>®</sup>

# SIMPLER

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# The burden of wounds in Australia is increasing

And the key to wound healing is early accurate assessment and use of or implementation of optimal management care pathways.



Statistics Reference: Issues Paper: Chronic Wounds in Australia. July 2017.

- The Burden of Wounds study<sup>1</sup> identified wound assessment needing to be at the forefront of all wound care contacts. It is essential that clinicians get it right first time.
- Wound healing is delayed by non-viable tissue and so early interventions to remove devitalised tissue are an essential part of wound management. Wound debridement is one of the most effective methods of reducing bioburden as it helps to remove adherent microorganisms and cellular debris<sup>2</sup>.
- Wound bed preparation (WBP) focuses on optimising conditions at the wound bed to encourage healing, identifying the cause of the problem in non-healing wounds, and implementing a care programme to achieve a stable wound<sup>3</sup>.
- WBP is embedded into the framework commonly known by acronym TIMES (Tissue, Infection/inflammation, Moisture imbalance, Edge of wound, Surrounding Skin)<sup>4</sup> as an easy-to-use tool that can be used at every wound contact.
- Wound management can be confusing, matching wound dressings to the requirements of the wound and the varied presentations of wounds make prioritising the treatment complicated<sup>5</sup>. TIMES allows the clinician to interpret characteristics of a wound and to decide on the most appropriate intervention.

The TIMES concept promotes a holistic approach to patient well-being in wound care and contributes to identifying barriers to healing and guides the plan of care to remove them<sup>6</sup>.

Optimal wound management can lead to a reduction in the frequency of dressing changes which further enhance the patient's quality of life<sup>7</sup>.

The TIMES assessment tool has become the gold standard model for wound assessment. This assists clinicians to identify and address the barriers of wound healing to create an optimal wound healing environment<sup>11</sup>.

Wound assessment is required at the initial patient contact with a documented holistic framework, including photographs and measurements. Care planning is necessary with the patient (and/or carers) developing goals and aims towards wound healing<sup>6</sup>.

#### This should include:

- Prevention and management of **infection** and **biofilms**<sup>11</sup>
- Reduction in pain (if present)<sup>11</sup>
- Address **wound odour**<sup>11</sup>
- Management and reduction in **exudate** levels<sup>11</sup>
- **Moisture** balance<sup>11</sup>
- Appearance of the **wound** (Size, tissue)<sup>8</sup><sup>11</sup>
- Quality of life improvement (Social isolation, psychological and physical issues)<sup>11</sup>

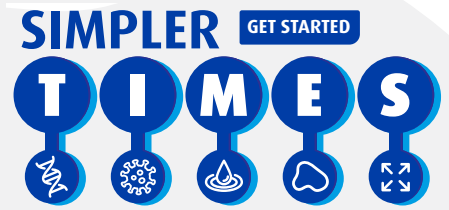
A full re-assessment is recommended to take place four weekly or if there is no response to treatment and signs and symptoms of deterioration occur.<sup>29</sup>

TIMES assessment is an easy-to-use tool that can be used visually at every wound contact; this will ensure all aspects of the **wound healing** are considered and measured against previous wound recordings.

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# Tissue



Tissue types are usually described as necrotic, sloughy, granulating and epithelialising. The presence of devitalised tissue impedes assessment as it can mask the true extent of a wound and can act as a potential source of infection<sup>17</sup>.

## Assessment

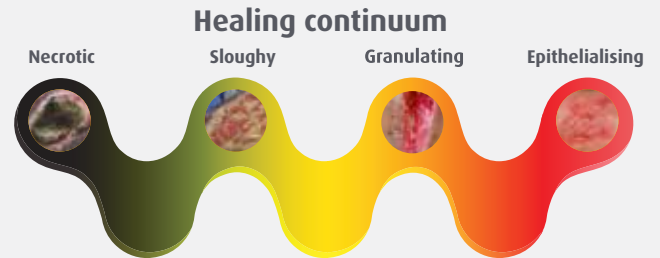
- Observe the **tissue** type, is the tissue viable?
  - Yes - Debridement and wound cleansing will encourage healing
  - No - Debridement can remove the barriers to healing if not
- Measure the length, width, depth and percentage of tissue type
- Photograph the wound and attach it to the patient record<sup>8</sup>

## Actions

- **Wound cleansing** at each contact will remove debris, disrupt the biofilm and bacterial bioburden.
- Debridement of unviable tissue such as slough and necrosis are required. Debridement by non-traumatic means such as **autolysis** is recommended<sup>9</sup>.
- This can be achieved using an **enzyme alginogel**<sup>®</sup>, as has been demonstrated in numerous clinical reports on a variety of wounds<sup>10</sup>.
- Follow local guidance for debridement measures. Autolysis using **dressings** as a debridement method can be combined with **mechanical debridement** to facilitate wound bed preparation.
- Ensure the wound edges and surrounding skin are protected.

## Outcome

- Clean, viable wound bed. The wound bed is prepared for dressing application to prevent infection and biofilm formation. Continue moist wound healing to encourage angiogenesis of granulation tissue, promote epithelisation and maturation<sup>11</sup>.



## Flaminal<sup>®</sup> Continuously debrides the wound<sup>19</sup>

- ✓ The Enzyme Alginogel<sup>®</sup> allows autolytic debridement combining autolytic, absorptive and antimicrobial features in the debridement process.<sup>18,19</sup>
- ✓ The debriding gel disrupts devitalised tissue, even dissolving necrosis and creating an optimal wound bed environment for healing.<sup>26</sup>
- ✓ It protects fragile granulation tissue and supports a balanced moist environment for epithelisation.<sup>14,15</sup>
- ✓ Flaminal<sup>®</sup> is suitable for a wide variety of wound types, including leg ulcers, diabetic foot ulcers, partial-thickness burns, pressure ulcers, oncology wounds. It is easily applied to cavities and tunnelling or undermining on wound edges.<sup>5,9</sup>



As and alginate dressing, Enzyme Alginogels<sup>®</sup> are highly absorbent and suitable for use on exuding wounds, and for promotion of autolytic debridement of debris in very moist wounds.<sup>10</sup>





# Infection

Infection in a wound causes pain, discomfort for the patient and delays wound healing.<sup>8</sup> It is widely accepted that the majority of chronic wounds will contain some degree of biofilm<sup>12</sup>. It must, therefore, be inhibited or disrupted, if healing is to proceed normally<sup>13</sup>. Even where the infection is not apparent, healing may also be impeded in the presence of a biofilm.

## Assessment

- Observe for signs and symptoms of infection such as redness, oedema, heat, and pain. Increased exudate volume, colour changes with malodour<sup>30</sup>.

## Actions

- Follow wound bed preparation pathway to disrupt bacterial bioburden, apply a suitable dressing to manage bacteria and/or biofilm and prevent a recurrence, protecting the wound<sup>30</sup>.
- Utilise topical and/or systemic antimicrobials, anti-inflammatories, protease inhibition<sup>30</sup>.

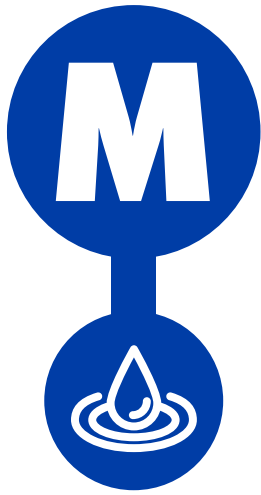
## Outcome

- Bacterial balance and reduced inflammation.<sup>8</sup>
- Pain reduction, reduced exudate levels and odour. The wound is on a healing trajectory.<sup>14</sup>

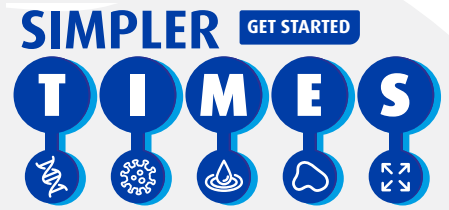
## Offers antimicrobial protection & reduces bacteria released from a biofilm<sup>19</sup>

- ✓ Flaminal<sup>®</sup> reduces bacteria released from a biofilm and offers antimicrobial protection.
- ✓ The antimicrobial enzyme system protects the wound against microbial colonisation and combats infection<sup>19</sup>.
- ✓ Flaminal<sup>®</sup> manages microbial content by absorbing micro-organisms into its structure and killing absorbed micro-organisms.
- ✓ It has a unique enzyme system to produce reactive oxygen radicals that destroy cell walls of bacteria that are first absorbed into the gel matrix<sup>22</sup>.
- ✓ The enzyme system in Flaminal<sup>®</sup> has been found to prevent the formation of biofilms and inhibit established biofilms in vitro<sup>20</sup>.
- ✓ The antimicrobial action of Flaminal<sup>®</sup> has been tested exhaustively using combinations of in vivo and in vitro experiments and clinical isolates<sup>21,22</sup>.

“ Flaminal<sup>®</sup> has a proven broad-spectrum antibacterial activity<sup>22</sup>, The active antibacterial component in Flaminal<sup>®</sup> can prevent the formation of biofilms and inhibit established biofilms in vitro.<sup>20</sup> ”



# Moisture



Exudate is a normal part of wound healing. Drying out can impede the healing process; lack of moisture slows epithelial cell migration, so the wound cannot progress to the re-modelling and/or maturation phase. High levels of moisture (often containing harmful proteases) can break down new wound tissue and macerate peri-wound skin<sup>14</sup>.

## Assessment

- Assess saturation of the previous dressing and for the presence of slough and eschar.

## Actions

- Apply moisture-balancing management strategy including frequency of dressing changes, type of dressings required.
  - Exudate can be managed with gelling alginate, and low moisture can be addressed using a product to donate fluid to the wound.
  - The optimal moisture balanced wound is always required to facilitate all wound healing<sup>6</sup>.
- \*Leg ulcers and oedema require assessment for compression suitability to reduce the lower limb fluid volume<sup>6</sup>.

## Outcome

- Moisture balance ensuring wound is conducive to healing. Protease levels are balanced. Patient quality of life is improved<sup>14</sup>.

## Flaminal® keeps the wound moist<sup>19</sup>

- ✓ Flaminal® helps to reduce excessive protease activity. Flaminal keeps the wound moist and absorbs excess of exudates or pus and enclosed bacteria.
- ✓ Flaminal® contains an absorbent alginate that absorbs exudate, debris, and harmful bacteria while keeping the wound moist.<sup>19</sup>
- ✓ Flaminal® Forte is indicated for moderately to highly exuding wounds and Flaminal Hydro is indicated for slightly to moderately exuding wounds, Flaminal keeps the wound moist.<sup>19</sup> A moist wound environment is beneficial for wound healing.<sup>4</sup>

The high fluid absorbency of the alginate ‘controls’ the fluid balance within the wound.<sup>24,25</sup>



# Edge of wound

Wound bed preparation is vital for epithelial advancement. Observe for rolled edges, undermining or tunnelling, callous formation, poor advancement of wound edge margins, maceration from excess moisture<sup>3</sup>.

## Assessment

- Observe for rolled edges, undermining or tunneling, callous formation, poor advancement of wound edge margins and maceration from excess moisture<sup>3</sup>.
- Does the edge need **debridement**?
- Are moisture levels **balanced**?

## Actions

- Identify and treat causative issues such as excess moisture and infection.
- **Infection and inflammation** will also have a negative effect on wound edges.
- Wound closure requires encouragement to support cellular activity and growth factors. Identify and address all other risk factors to stimulate this process<sup>15</sup>.

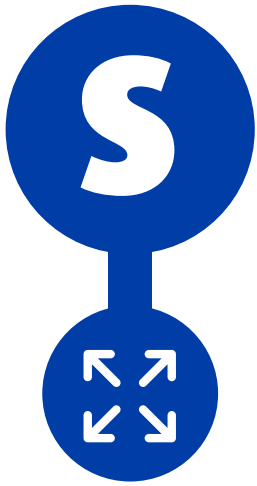
## Outcome

- Advancing wound edges as migration of epithelial cells commence progressing to maturation and full wound closure<sup>3</sup>.

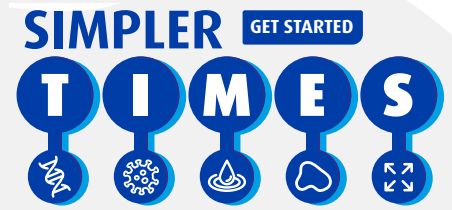
## Safe for skin and protects wound edges<sup>19</sup>

- ✓ Flaminal® protects the wound border and is non-cytotoxic to keratinocytes and fibroblasts.
- ✓ Studies on cells and tissues show Flaminal® to be safe and non-toxic to the advancing new cell growth.<sup>21</sup>
- ✓ The antimicrobial mode of action of Flaminal® only takes place within the Enzyme
- ✓ Alginogel® structure (within the Flaminal matrix), and therefore Flaminal does not destroy healthy skin cells.<sup>22</sup>
- ✓ At dressing changes Flaminal® does not encourage the dressing to stick to the wound, making it easy to remove and preventing the wound edges becoming macerated.<sup>28</sup>

Flaminal® is safe for skin and non-toxic.<sup>21,22</sup>



# Surrounding skin



It is essential to look further than the wound edges and address the surrounding area/limb also.

The removal of hyperkeratosis and rehydration of dry skin can minimise potential infection and inflammation. Damage can be caused by excess exudate, excoriation, MASD, MARS1 or an allergic reaction to a dressing<sup>6</sup>.

## Assessment

- Assess for the presence of hyperkeratosis, dry flaky skin and signs for excoriation<sup>6</sup>.

## Actions

- Cleanse and apply **emollient** if dry or address moisture levels and protect from further damage if skin excoriated.
- Applying **emollients** will maintain moisture balance and promote a balanced skin pH level, providing skin protection<sup>15</sup>.

## Outcome

- Viable skin. Maintaining good skin health and integrity overall reduces risk of breaks to the skin and infection. This is through a skin care regime, nutritionally balanced diet and reduction of injury risk factors in the environment<sup>6</sup>.

## Does not damage surrounding skin<sup>19</sup>

- ✓ Flaminal<sup>®</sup> reduces peri-wound maceration and excoriation caused by excess exudate.<sup>5</sup>
- ✓ Problems of the peri wound skin within 4cm of the wound edge as well as any surrounding skin under the dressing or compression therapy are common and may delay healing, cause pain and discomfort, enlarge the wound, and adversely affect the patient's quality of life<sup>31</sup>.
- ✓ Greater moisture exposure reduces skin barrier function and increases the risk of skin breakdown and maceration. This may make patients more susceptible to developing a contact dermatitis.<sup>25</sup>
- ✓ Damage can occur to surrounding skin from excess exudate, causing maceration, excoriation, skin-stripping from adhesive removal, and conditions such as eczema and dermatitis.<sup>15</sup>

“Flaminal<sup>®</sup> improves wound edges and surrounding skin.”<sup>17</sup>



# Simpler wound management, without compromise

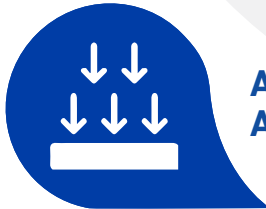
Wound management can be confusing, it doesn't have to be when using **TIMES** and **Flaminal®**

Flaminal® cuts the noise in wound care management, making wound assessment and daily interventions for **SIMPLER TIMES**. Flaminal® can be utilised throughout the healing trajectory and all five aspects of the **TIMES** paradigm.<sup>5,16,17</sup>

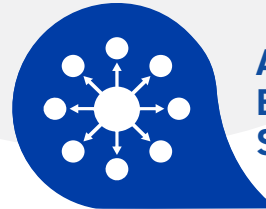
## Flaminal® consists of three essential components for wound healing



Debriding Gel



Absorbent Alginate



Antimicrobial Enzyme System

Flaminal® is a hydro-active, Enzyme Alginogel consisting of hydrated alginate polymers in a polyethylene glycol (PEG) matrix embedded with a patented broad-spectrum antimicrobial enzyme complex.<sup>26</sup>



Debriding Gel



Absorbent Alginate



Antimicrobial Enzyme System

= Enzyme Alginogel<sup>1</sup>

Flaminal® (Hydro and Forte) are a class of wound healing agents called Enzyme Alginogel®



Defend



Protect



Improve

These are the prime properties for ensuring rapid wound healing.<sup>19</sup>





# Simpler wound management, without compromise

- ✓ Speeds up the healing time<sup>27</sup>
- ✓ Non-cytotoxic<sup>22</sup>
- ✓ Manages moisture balance<sup>26</sup>
- ✓ Easy to apply
- ✓ Continuously debrides the wound<sup>26</sup>
- ✓ Offers antimicrobial protection<sup>19</sup>
- ✓ Reduces bacteria released from biofilm<sup>19</sup>
- ✓ Reduces wound odour caused by bacteria<sup>19,27</sup>



Flaminal® in its two-concentration of alginate presentations, is designed to make wound management simpler without compromising clinical efficacy.



## Ordering Information

EBOS Code	Description	UOM
AS14500	Flaminal Forte 50g	Each
AS14540	Flaminal Hydro 50g	Each
AS04515	Flaminal Hydro 15g	Each



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