Best Practice Statement:

Optimising the use of Versiva® XC™ gelling foam dressing

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Foreword

Wound exudate can proliferate from both acute and chronic wounds causing great misery to patients as it is associated with soiled bandaging and clothing, malodour, distress and social isolation (Day and Hayes, 2008). Dressings are frequently used for the local management of exudate, with its volume, viscosity and colour all influencing dressing choice (Bale, 2006). When selecting a dressing, practitioners have an organisational duty to consider its cost-effectiveness, in addition to its clinical performance, so they must critically evaluate all outcomes to ensure the dressing is meeting both clinicial and economical expectations (Beldon, 2007). Those charged with caring for patients with wounds in the UK are also faced with the challenge of trying to ensure that their practice is of the highest standard, their process is evidence based, and their understanding of wound management products is current, while juggling heavy clinical loads and their associated challenges. Unfortunately, many healthcare professionals do not have the opportunity or the time to source the information they require to meet these aims, and are left to use treatments they are familiar with or new products without being sure of the 'where, when and how'. Unfortunately, this can sometimes result in negative outcomes. Inappropriate wound management can result in delayed healing, which in turn results in an increased risk of wound-related complications such as infection, and a reduction in the patient's quality of life. In addition to these personal costs to the patient, chronic wounds are responsible for a health service expenditure of approximately £2.3–3.1 billion per year (Bottomley, 2007; Posnett and Franks, 2007).

Versiva® XC™ gelling foam dressing is a unique product that combines a foam dressing with Hydrofiber® technology. Dowsett (2008) stated that 'Gelling foam represents a new generation of wound care technology that has been designed to protect the peri-wound skin and reduce the risk of maceration, as well as providing comfort for patients'. Publications to date demonstrate that Versiva XC dressing achieves these objectives when used to treat patients with moderate to heavily exuding wounds — a review of the literature is provided on p.10–12 of this document. The authors of this publication performed a retrospective evaluation of 50 patients with 50 wounds of varying aetiology who were treated with Versiva XC dressing over a 6-month period in 3 different centres. The findings, summarised on p.12–15, supported those outlined in the literature review, in terms of the ability of Versiva XC dressing to conform, protect the peri-wound area, reduce the risk of maceration and promote healing. The evaluation also revealed negative outcomes resulting from the inappropriate use of the dressing, and highlighted how the clinician's understanding of a product's capabilities can influence outcome for their patients.

In order to set minimum standards and outline guiding principles with the intention of optimising wound care delivery when using Versiva XC gelling foam dressing, this Best Practice Statement has been developed by an expert panel (see opposite) using the findings of the literature review and 50-subject evaluation, and following the key principles of best practice:

- Best Practice Statements (BPSs) are intended to guide practice and promote a consistent and cohesive approach to care
- Statements are derived from the best available evidence, including expert opinion at the time they are produced, recognising that levels and types of evidence vary
- Information is gathered from a broad range of sources to identify existing or previous initiatives at local and national level, incorporate work of a qualitative and quantitative nature, and establish consensus
- Statements are targeted at practitioners, using language that is both accessible and meaningful.

This document is intended for use by all those involved in the care of patients with wounds to assist in the delivery of a consistent, high standard of wound care when using Versiva XC gelling foam dressing.

Development team

This document was compiled, and the evaluation of Versiva® XC™ gelling foam dressing reported on p. 12–15 of this document was carried out, by:

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Introduction

The inflammatory phase of wound healing begins as soon as injury is sustained. This normal response to wounding is essential if healing is to occur. Inflammatory mediators, e.g. histamine, attract chemical agents and cells to the area to remove bacteria and debris from the wound. The mediators also increase capillary permeability, causing local vessels to leak fluid into the wound. This fluid is known as exudate (WUWHS, 2007).

Exudate contains 'a variety of substances including water, electrolytes, nutrients, inflammatory mediators, white cells, growth factors and waste products' (WUWHS, 2007). Protein-digesting enzymes or proteases (e.g. matrix metalloproteinases; MMPs), which remove fibrin and eschar from the wound, are present mainly in an inactive form.

In an acute wound which is progressing through the normal healing cycle, the largest volume of exudate is produced during inflammation and proliferation (Cutting, 2004), where it is considered to be beneficial as it appears to promote wound closure in a number of ways:

- It assists with autolytic debridement of necrotic and sloughy tissue by facilitating the ingress of white cells
- It facilitates the transportation of essential nutrients for epithelial cells
- It prevents dessication of the wound bed, which can lead to further deterioration of local tissue viability.

As the wound heals, exudate production generally reduces over time.

Other factors influencing the volume of exudate produced include wound type, origin, location, and size (Cutting, 2004). For example, large pressure ulcers or surgical wounds that are being deliberately left to heal by secondary intention may produce large amounts of exudate. Some specific wound types, e.g. burns, rheumatoid ulcers and skin donor sites also generate exudate in large quantities, while ischaemic ulcers are generally associated with minimal volumes of wound fluid (WUWHS, 2007).

Underlying disease processes may also have an effect on exudate production, e.g. venous hypertension may be a systemic cause of copious exudate production in patients with venous or mixed aetiology leg ulcers or chronic heart failure can result in the lower limbs 'leaking' exudate resulting in wet legs (Adderley, 2008). Microbial contamination may also influence exudate volume: high bacterial load is often responsible for the copious fluid produced by fungating wounds (Adderley, 2008). In patients who are dehydrated, exudate production may be minimal (WUWHS, 2007).

In addition to exudate volume, its colour, consistency and odour can give clues to the wound's status (WUWHS, 2007). For example, green exudate may be indicative of bacterial infection, yellow/brown exudate may be contaminated by material from a urinary or enteric fistula, and grey/blue exudate may be the result of using silver-containing dressings. Exudate that is of a high viscosity may be the result of infection or dressing residue from dressings, and low viscosity may be caused by malnutrition or cardiac disease. Malodour is frequently associated with infection or necrotic tissue (WUWHS, 2007).

At each dressing change it is important to monitor the characteristics of the exudate, since a sudden, unexpected change indicates that reassessment of the patient and their wound is required (WUWHS, 2007).

The role of exudate in chronic wounds

In chronic wounds such as venous leg ulcers, pressure ulcers and diabetic foot ulcers, the exudate produced may be

detrimental to wound closure and may be a major cause of delayed healing or non-healing. Vowden and Vowden (2004) stated that: 'exudate from a non-healing chronic wound consists of a cytotoxic chemical soup capable of suppressing cell division and causing cellular death'.

Unlike the exudate produced by normally healing wounds, chronic wound fluid contains elevated levels of inflammatory mediators and activated MMPs (WUWHS, 2007). Although these active degrading proteolytic enzymes have a vital role to play in wound healing by destroying devitalised tissue via autolysis, if their activity continues for longer than is necessary then they may actually deter or damage the growth of new tissue through the degradation of growth factors and extracellular matrix components, contributing to the wound's chronicity (Moore, 2003).

The adverse effects of exudate

Excessive volumes or the mismanagement of exudate can bring misery to patients' lives. Concerns surrounding the anticipated or actual leakage of exudate through bandaging and onto clothing or furniture can be distressing and inconvenient for the patient with a wound, and can lead to social isolation (Adderley, 2008; Day and Hayes, 2008). Accompanying malodour can have the same effects on the patient, and may also affect their appetite, in some cases leading to malnutrition (Adderley, 2008).

Uncontrolled wound symptoms, such as exudate, may increase the risk of delayed healing and development of psychological problems such as depression and anxiety (Moffatt et al, 2008).

Exudate can also macerate and excoriate the skin surrounding the wound which may increase the risk of infection and cause the patient great pain and distress.

Understanding maceration

Maceration of the peri-wound area is caused by prolonged exposure to exudate, whether excessive amounts or inappropriately managed exudate. Causes of maceration include:

- The use of inappropriate dressings that are unable to handle the volume of exudate effectively resulting in leakage or the retention of moisture/exudate against the skin, resulting in overhydration of the epidermis
- Failure to change dressings frequently enough
- Failure to protect the peri-wound skin from the effects of exudate using a suitable barrier cream
- Destruction of the tissues by the proteases present in chronic wound exudate (Hampton and Stephen-Haynes, 2005).

Maceration can be defined as 'the softening of the tissue that has remained moist or wet for a long period of time' (Collins et al, 2002) and is usually diagnosed due to the presence of white tissue around the wound. However, it is easy for the inexperienced practitioner to mistake new epithelial growth for maceration, since it too presents as a pale and slightly opaque rim surrounding the wound (Cutting and White, 2002).

It is therefore important that the practitioner is able to distinguish between these two tissue types, since inappropriately treating the new epithelial growth with moisture-absorbing dressings in an attempt to reverse non-existent maceration could hinder the healing process (Cutting and White, 2002).

Figure 1 shows new healthy epidermal tissue which is very pale, almost white in appearance. This is clearly not maceration as it is uniform in appearance around the whole wound edge. There appears to be limited exudate levels within the wound and the peri-wound skin is healthy. Within a couple of days, this white tissue will become a healthy pink in colour (Cutting and White, 2002).

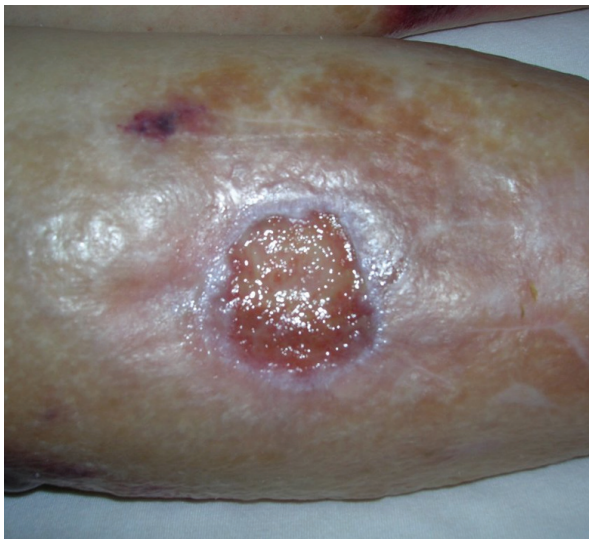

Figure 1. The formation of new epidermal tissue can be mistaken for maceration by the inexperienced practitioner.

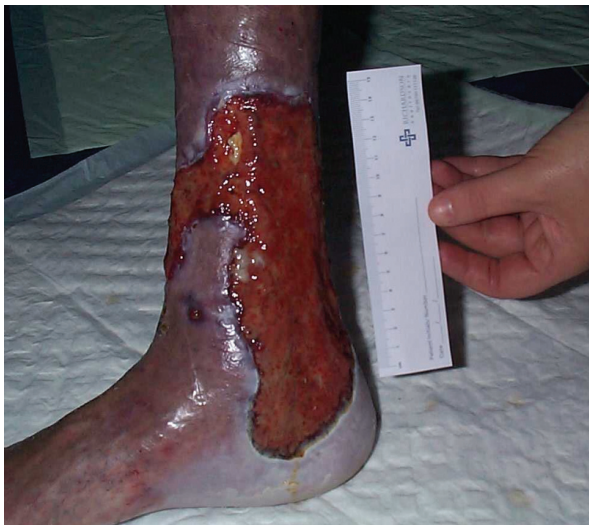

Figure 2. A wound with gravitational maceration.

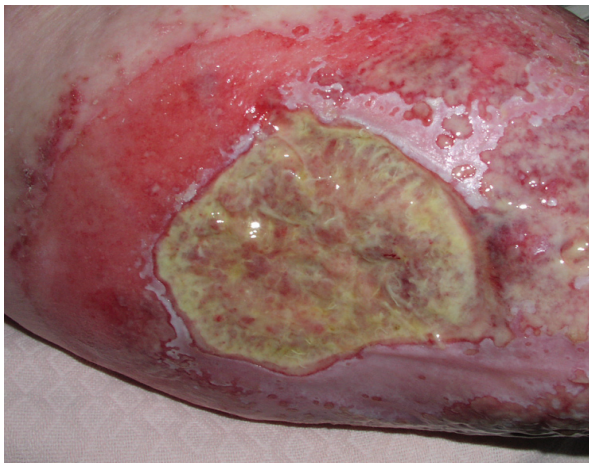

Figure 3. Peri-wound excoriation.

Maceration generally presents as 'an opaque or white 'soggy' area of peri-wound skin that occurs when moderate to heavy exudate levels are present' (Cutting and White, 2002). The presence of this white soggy tissue is rarely uniform and tends to present as gravitational maceration where it accumulates at the lowest point of the wound. *Figure 2* clearly demonstrates an edge around the wound which is white and wet in appearance; it is not uniform as it is much wider at the base of the wound where the exudate has gravitated down and pooled at the heel area, resulting in maceration.

Excoriation, where the skin is 'traumatised, worn away or abraded' (Collins, 2002) occurs when chronic wound fluid comes into contact with healthy intact skin. The exudate can be very damaging, causing destruction of the epidermis and sometimes dermal layer. Peri-wound excoriation usually presents as a 'fiery' red, inflamed, wet, painful tissue *(Figure 3)* which can be further exacerbated by infection.

Damage may also occur to the peri-wound skin as a result of using adhesive products, especially if there is frequent change of dressing (Dowsett, 2008).

Managing exudate and its effects in clinical practice

The World Union of Wound Healing Societies (2007) stated that 'An important aim of exudate management is to minimise the detrimental effects and maximise the positive effects of exudate'. It is vital that a thorough, systematic assessment of the patient and their wound is carried out and that it recognises the importance of treating any underlying condition(s) and the selection of an appropriate wound dressing. Effective exudate management should also address related issues such as odour, pain, and damage to the peri-wound skin (WUWHS, 2007). Dressings should only be used to manage exudate as part of a holistic care plan that addresses any systemic and wound-related conditions that may also influence wound exudate characteristics (WUWHS, 2007; Dowsett, 2008).

At each dressing change, both the wound and the dressing should be reassessed so that the dressing's effects on wound healing and exudate production can be monitored (WUWHS, 2007; Dowsett, 2008).

Selection of an appropriate dressing

When considering local exudate management, the clinician has an abundance of absorbent dressings to choose from (Beldon, 2008). From this wide variety, it is important that the practitioner selects a product that is fit for purpose in terms of clinical outcomes and cost-effectiveness (Beldon, 2007). Consideration must be given to the fact that highly exuding wounds can be expensive to manage due to the frequency of dressing change needed and the nursing time required to perform these changes — these factors often result in hidden costs (Beldon, 2007). Thus selecting the cheapest dressing available is not neccesarily the most cost-effective option, if doing so results in the need for more frequent dressing changes (Beldon, 2008).

The dressing selected will ideally be able to handle exudate by absorbing and retaining it, while remaining in position and intact. It will also maintain an optimal level of moisture at the wound surface to promote healing, without spreading the exudate onto the peri-wound skin (Bishop et al, 2003; Dowsett, 2008). The dressing must also be easy and atraumatic to apply, remove and wear (Dowsett, 2008).

However, in reality, not all absorbent dressings perform to the same standard or have the same properties. As a result, clinicians must be knowledegable about the dressings available so that once assessment has identified the patient's individual needs, they are able to match these to the performance characteristics of the dressings available and select the most appropriate product (Dowsett, 2008). For example, if the wound is located on a difficult to dress area such as the sacrum or heel, the use of a product designed specifically for these anatomical locations may make application easier and may conform to the wound better than a standard dressing. If the wound is producing large volumes of exudate, consideration should be given to if one or two dressings are required, and if the latter, how these will interact with each other. The condition of the peri-wound area should influence the decision to select adhesive or non-adhesive dressings (Vowden and Vowden, 2004; Dowsett, 2008).

Finally patient preference is a vital factor that may influence compliance with treatment, so the clinician should ensure that the patient is happy with the dressing(s) selected, and that they are able to apply and remove them, if necessary.

Versiva® XC™ gelling foam dressing

Versiva® XC™ gelling foam dressing (ConvaTec, Ickenham) combines foam with Hydrofiber® technology in a thin, easy-to-use dressing which is indicated for use in heavily exuding acute or chronic wounds. Unlike traditional foam dressings which absorb fluid into the air pockets of the foam structure, Versiva XC dressing absorbs fluid into the interior of the fibres, causing them to swell and merge with each other to form a cohesive gel (*Figures 4a,b and c*). This gelling action is specific to the area where fluid is absorbed; where there is no fluid the fibres remain dry. Because fluid is absorbed and retained directly into the fibres, rather than just being taken into air gaps or pockets between fibres or inside a foam, the fluid is effectively retained when pressure is applied, such as when used under compression.

Clinical studies

To date, two multicentre clinical studies have been published that demonstrate the efficacy of Versiva XC gelling foam dressing when used to treat patients with exuding pressure ulcers and leg ulcers.

Vanscheidt et al (2007) carried out a prospective, open-label, multicentre clinical

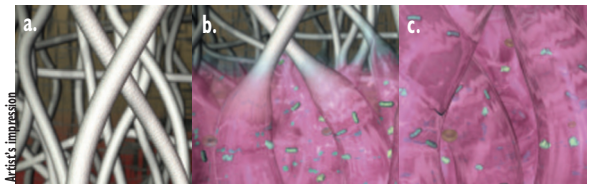

Figure 4. a. Hydrofiber® technology in the Versiva® XC™ dressing before application to a wound, b. Transforming into a gel on contact with exudate, and c. Locking in fluid and harmful components contained within exudate, keeping them away from the wound.

study to evaluate the safety and performance of Versiva XC gelling foam dressing in 46 subjects with moderate to heavily exuding leg ulcers. Safety was measured by the nature and frequency of reported dressing-related adverse events, while the dressing's performance was assessed using the parameters of ulcer healing, exudate management, peri-wound skin condition, pain/comfort on application and removal, and ease of use. During the 28-day study, Versiva XC gelling foam dressing was applied, with standard compression therapy if appropriate, and dressings were changed at least once every 7 days.

Results revealed that Versiva XC dressing was safe to use in the patient group studied, since none of the 46 subjects had a dressing-related adverse event. In terms of the dressing's performance, Versiva XC gelling foam dressing managed moderate to heavily exuding wounds well, with no or mild leakage on most dressing changes, despite an average wear time of 3.2 days. Data was collected for 509 dressing changes, of which 247 were performed in the clinic. Of these, 99% were performed for reasons other than leakage (routine=98%; maximum wear time=1%). Furthermore, despite the presence of moderate to heavy wound exudate in all subjects, maceration had resolved at the final evaluation for 9 of the 11 patients who had it at baseline, and only three patients had new onset maceration at the final visit.

Versiva XC dressing was also found to have a positive effect on both wound healing, and the condition of the peri-wound skin. Of the 46 subjects included in the study, 11% healed and 78% improved in 4 weeks or less. The mean ulcer area decreased at each evaluation for these patients suggesting that those who did not heal within the study period where placed on a healing trajectory (Vanscheidt et al, 2007).

At the start of the study, only four of the 46 subjects had healthy peri-wound skin, but at the final evaluation (n=45), 14 subjects were rated as healthy, reflecting a significant shift (p=0.006). Skin condition improved in 11 or remained stable (n=33) in all but one of the subjects using Versiva XC gelling foam dressing.

Compared with the pre-study dressing, Versiva XC dressing was associated with statistically significant reductions in ulcer pain with the dressing in place and during removal. Comfort was rated as 'excellent' by 25 of the 46 subjects and 'good' by 13. These findings were supported by the investigators who considered the dressing to be excellent in terms of its conformability and ease of application and removal.

Vanscheidt et al (2007) concluded that a management regimen including Versiva XC gelling foam dressing and appropriate compression may be a suitable option for the management of moderately to heavily exuding leg ulcers.

Parish et al (2008) reported similar findings in their prospective, multicentre study of 23 subjects with exuding pressure ulcers who were managed with Versiva XC gelling foam dressing.

The primary outcome of safety was assessed by type and frequency of dressing-related adverse events, while the dressing's performance was evaluated by subject rating of comfort and pain, and investigator rating of ease of use, exudate management, leakage, adherence and trauma, and condition of the ulcer and surrounding skin.

All participants had their wounds dressed with Versiva XC gelling foam dressing, and tape/

roll bandaging was used to hold the dressing in position if required. If wound filler was needed, AQUACEL® dressing was used. Appropriate pressure reducing/relieving devices were prescribed for all patients. Dressing changes were performed by the investigators at least once every seven days, and final evaluations were performed on healing or after 28 days of the study treatment or on patient withdrawal, whichever came first.

The results of the study showed that 14 patients had adverse events, seven of which were considered to be dressing-related. Three of these events resulted in withdrawal (infection, n=1; wound enlargement, n=1; erythema, n=1), while four were able to remain in the study (maceration, n=3; blistering, n=1). When discussing their findings in relation to incidents of maceration, Parish et al (2008) commented that the normal process of autolytic debridement under an occlusive dressing may be mistaken for maceration, and that recognition of this was dependent upon the individual investigator.

In terms of performance, Versiva XC gelling foam dressing was found to protect the peri-wound skin and manage exudate well in the elderly cohort. Despite skin fragility, Versiva XC dressing was rated by the investigators as protecting the peri-wound skin in 79% of subjects. Surrounding skin healed or improved in 65% of participants, and pressure ulcers either healed or improved in 61%.

A mean wear time of 4.2 days (SD=2.4) indicated that Versiva XC gelling foam dressing managed pressure ulcer exudate well. Indeed, the investigators judged dressing wear time as good or excellent for 61% of subjects and capacity to avoid leakage as good or excellent for 69% of subjects.

Ease of application (92%), removal (96%) and conformability (69%) were rated as mostly good or excellent by investigators at the final evaluation. Investigator ratings of dressing adherence at the final evaluation were good or excellent for 48% of subjects and fair or poor for 52%. Parish et al (2008) suggested that the reported difficulties in adherence may be a result of the exposure of the dressing to pressure, shear and friction. Of the participants who were able to respond to questioning, 90% rated the dressing as comfortable, soothing or cushioning.

Parish et al (2008) concluded that a regimen including Versiva XC dressing was effective in managing exudate, protecting surrounding skin and maintaining patient comfort, while supporting healing in patients with pressure ulcers.

Case reports

The findings of these studies have also been observed and reported in clinical practice. Numerous case reports describe the efficacy of Versiva XC gelling foam dressing when used as a primary or secondary dressing, or under compression in a variety of moderately to heavily exuding wound types.

In patients with venous leg ulceration, Versiva XC dressing has been found to promote wound healing (Button, 2007; Capillas, 2007; Delgado and Borrego, 2007; Smith, 2007; Beldon, 2008) and handle exudate well (Cerame, 2007; Smith, 2007; Dowsett, 2008), resulting in increased wear times (Cerame, 2007; Delgado and Borrego, 2007; Beldon, 2008; Dowsett, 2008). Versiva XC gelling foam dressing has also been reported as maintaining the peri-wound skin in the presence of exudate and improving its condition when macerated (Button, 2007; Delgado and Borrego, 2007; Smith, 2007; Beldon, 2008). The dressing has been reported as conforming to the wound well, being comfortable to wear (Delgado and Borrego, 2007) and reducing wound-related pain (Button, 2007; Smith, 2007; Beldon, 2008; Dowsett, 2008) and pain at dressing change (Capillas, 2007) in patients with venous leg ulceration. The dressing has also been reported as promoting healing, alleviating pain and handling exudate well both alone (Cerame, 2007; Beldon, 2008) and as a secondary dressing when used in conjunction with AQUACEL Ag dressing (Button, 2007) under compression bandaging.

Figure 5. Versiva® XC™ gelling foam dressing: a. Non-Adhesive Square; b. Adhesive Square; c. Adhesive Sacral.

Positive outcomes in terms of healing, exudate handling, peri-wound condition and decrease in wound size have also been observed in patients with pressure ulceration (Delgado and Borrego, 2007; Manzanero, 2007), and wounds resulting from trauma (Manzanero, 2007) or post-operatively (Dowsett, 2008).

A retrospective evaluation of Versiva® XC™ gelling foam dressing in patients with a variety of wound types

In order to further investigate the findings of the studies and case reports described in the literature review, a retrospective evaluation was carried out on the use of Versiva® XC™ gelling foam dressing in 50 patients, with a variety of wound types in primary, secondary and care homes settings in three different geographical locations (Aberdeen, Yorkshire, and London). Data was analysed for any patient referred to the tissue viability departments of the three sites over a 6-month period and for whom wound management with Versiva XC dressing was indicated. Prescribers had access to the full Versiva XC dressing range which included Adhesive and Non-Adhesive Square dressings (*Figures 5a and b*) in a range of sizes, and adhesive dressings designed specifically for use on the sacrum and heel; Adhesive Sacral (*Figure 5c)* and Adhesive Heel (*Figure 6*).

Data relating to the dressing's performance in terms of its conformability, pain at dressing change and during wear-time, peri-wound condition, exudate management, and promotion of wound healing was entered onto a central online registry at each patient review, along with accompanying clinical images. During the 6-month period, 50 subjects were treated with Versiva XC gelling foam dressing across the 3 sites (female n=30; male n=20) with a total of 50 wounds (pressure ulcers, n=20; leg ulcers, n=13; trauma wounds, n=10; surgical wounds, n=4 and complex wounds, n=3). The data for each of the 50 subjects was then analysed by the investigators to identify emerging themes for the five areas of performance.

Conformability

The majority of the wounds were treated using the Adhesive Square Versiva XC gelling foam dressing and the evaluation revealed it conformed well. In the cases where conformability had presented a challenge, analysis revealed a link between the use of the Non-Adhesive Square dressing under retention bandages. It is thought that this could result in movement of the dressing during its wear time since conformability had not been a problem in those patients in which Versiva XC Adhesive Square dressings had been used beneath compression.

In the cases were Versiva XC dressing had been used to dress heel wounds, it was clear that if the Adhesive Heel dressing was used by a practitioner familiar with the product, no problems in terms of conformability were noted (*Figure 6*). Issues arose only when heels were dressed using either the Adhesive or Non-Adhesive Square Versiva XC dressings. Overall the conformability was found to be good in the 50 subjects, but it was recognised that this was only the

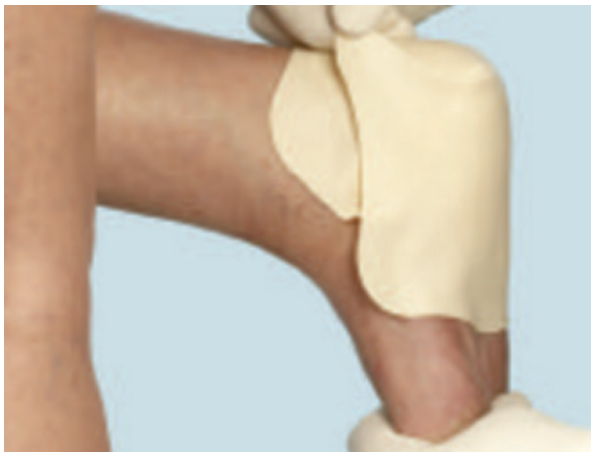

Figure 6. Versiva® XC™ Adhesive Heel dressing.

case when the dressings were applied by a practitioner familiar with the recommended use of the product, and who had selected the correct dressing type for the anatomical location of the wound.

Pain at dressing changes and during wear time

The dressing was not found to result in pain either on application, removal or during wear time for the majority of the cases evaluated. Only two patients reported pain while using Versiva XC gelling foam dressing. In one case, pain was reported during wear time as the result of conformability issues; a Non-Adhesive Square dressing had been used under a secondary retention bandage, resulting in dressing movement. The other reported case of pain was following application of the dressing to a foot ulcer which on review was diagnosed as being critically colonised. Overall there was a clear trend towards pain-free dressing changes and wear times.

Peri-wound skin condition

In the majority of cases evaluated the peri-wound areas were found to be undisturbed by dressing use or undamaged by maceration (*Figure 7*). This was also true in wounds with high levels of exudate which required daily dressing changes. In some cases, AQUACEL® dressing was used as a primary and Versiva XC dressing as a secondary layer in order to handle large volumes of exudate. In wounds which were exuding highly and in which maceration occurred, a link was made with insufficient frequency of dressing change or with failure to apply AQUACEL dressing as a primary dressing In one case of gravitational maceration, review of the case notes indicated this could have potentially been avoided with the additional use of AQUACEL dressing. However, despite the development of a single area of maceration, the wound, which had been present for 15 years, did show signs of healing. In another reported case of maceration, review of the clinical images revealed that the macerated area was in fact a white ring of healthy epithelial tissue around the wound (*Figure 7*).

Overall the dressing was found to have a positive impact on the peri-wound area (*Figure 8*) and where this was not the case, the role of the practitioner was pivotal. From review of the cases it was clear that the clinician must use the product appropriately, and intervene with the use of a second absorbent dressing and/or increased frequency of dressing change to prevent maceration of the peri-wound skin in patients with highly exuding wounds.

Exudate management

Retrospective analysis of the 50 cases also revealed that when Versiva XC gelling foam

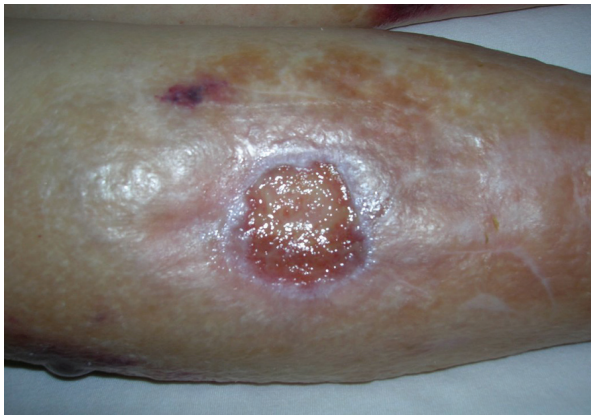

Figure 7. Following the use of Versiva® XC™ gelling foam dressing, this wound has a healthy peri-wound area and is progressing towards healing. The wound has a granulating bed and a border of light-coloured epithelium on the margins. Care should be taken not to mistake this delicate tissue for maceration.

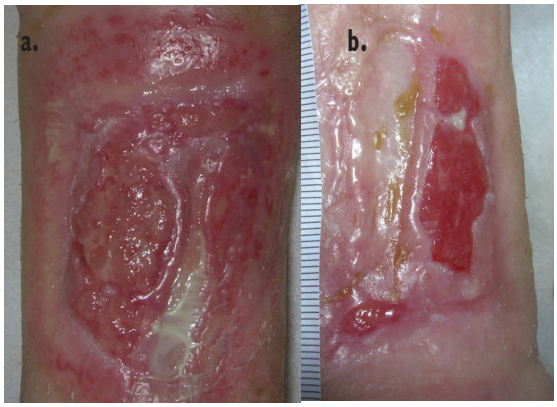

Figure 8. a. A skin-graft site on the forearm with an excoriated peri-wound area. Following 2 weeks of treatment with Versiva® XC™ dressing (b) the wound shows signs of healing, with epithelial tissue forming across the wound and the peri-wound area appearing healthy.

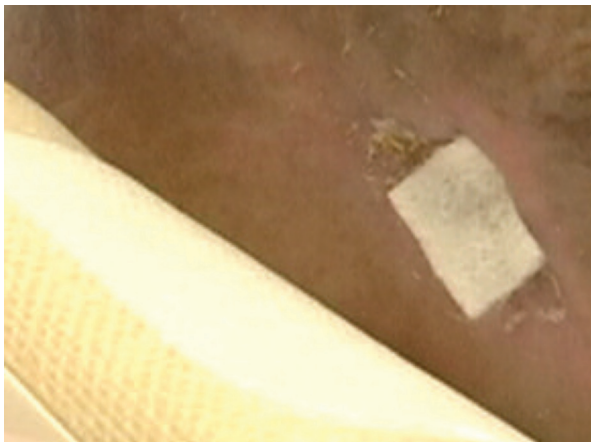

Figure 9. AQUACEL® dressing was used as a primary dressing if high levels of exudate were present or wound filler was required, and the wound covered with Versiva® XC™ gelling foam dressing.

dressing was used as a primary dressing it was able to manage high to moderate exudate levels when changed with an appropriate frequency. In cases where very high levels of exudate were observed or a cavity was present, the wound was lined with AQUACEL dressing and covered with Versiva XC dressing with positive outcomes (*Figure 9*). During the review of all cases it became apparent that this combination resulted in effective management of very high/high exudate levels, leaving the peri-wound area undamaged and enabling the wound to progress towards healing. The investigators concluded that when the product was used appropriately, and where required in combination with AQUACEL

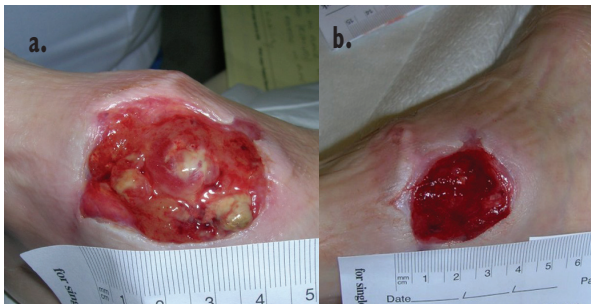

Figure 10. a. A foot wound was treated with Versiva® XC™ dressing for 3 weeks resulting in progress towards healing (b) with the formation of granulation tissue, a healthy wound margin and wound contraction.

dressing, Versiva XC gelling foam dressing demonstrated its ability to manage exudate in a wide variety of wounds and clinical situations (*Figures 7 and 8*).

Promotion of healing

In those subjects who remained free of infection and whose overall general health allowed it, healing was observed (*Figures 7,8 and 10*). In one case as described earlier, the formation of new granulation tissue was found in an ulcer which had been present for 15 years before review. Given that a key component of the dressing is Hydrofiber® technology, the ability to facilitate healing was not surprising since all of the investigators regularly observe reliable healing results when using AQUACEL dressing in their clinical practice.

Conclusion

The findings of this evaluation reflected those of Parish et al (2008) and Vanscheidt et al (2007) that Versiva XC dressing is effective in managing exudate, protecting the peri-wound skin and maintaining patient comfort, while supporting wound healing. Furthermore, the evaluation showed that in all areas the dressing performed well when used appropriately by a practitioner knowledgeable about the product range and its capabilities (see hints and tips opposite). Problems occuring from inappropriate use of the dressing were also identified, and were used, along with key points from the literature, to develop statements (that make up the remainder of this document) to guide best practice when using Versiva XC gelling foam dressing to treat a patient with a moderate to highly exuding wound.

Hints and tips to optimise the use of Versiva® XC™ gelling foam dressing

1. Ensure that the type of Versiva® XC™ dressing selected is appropriate for the anatomical location of the wound

Versiva XC gelling foam dressing is available in a range of formats, e.g. Adhesive, Non-Adhesive, Adhesive Sacral and Adhesive Heel, and it is important to choose the correct dressing type. For example, when managing pressure ulcers on the heel, it is beneficial to use Adhesive Heel dressing as this conforms well to the wound contours, and can reduce the risk of the dressing slipping due to pressure and friction. In patients with friable peri-wound skin, it is advisable to use a Non-Adhesive dressing to avoid damaging the delicate tissue

2. Ensure that the size of the Versiva XC dressing selected is large enough for the pad to comfortably cover the wound bed

When using Versiva XC dressing, the practitioner should ensure that the pad size of the dressing is large enough to cover the wound fully in order to optimise the performance of the dressing.

3. In wounds which are heavily exuding, Versiva XC gelling foam dressing can be used as a secondary dressing

If Versiva XC dressing is being used as a primary dressing, but large volumes of wound exudate are produced or there is an increase in exudate levels, it may be beneficial to use it in conjunction with AQUACEL® dressing to provide extra absorbency

4. If exudate is being managed by two dressings, this will need to continue even if the secondary dressing is switched to Versiva XC gelling foam dressing

If AQUACEL dressing is being used as a primary dressing and the decision to switch the secondary dressing to Versiva XC dressing is made, it is important to continue using both products since the volume of exudate produced will need the absorbency of both dressings in combination.

5. If the primary AQUACEL dressing dries out when used in conjunction with a traditional foam, try switching the secondary dressing to Versiva XC dressing

As Versiva XC gelling foam dressing has Hydrofiber® technology, it may not dry out the AQUACEL dressing like a traditional foam. Furthermore, Versiva XC dressing has a low Moisture Vapour Transmission Rate (MVTR) which means that it will remain moist for longer and thus can be used in wounds which have a tendency to dry out when using AQUACEL with a secondary foam.

6. It is important to distinguish between white epithelial tissue and maceration

When using Versiva XC dressing the practitioner may observe a uniform white border at the inner wound margin; this is likely to be new epithelial tissue growth and should not be confused with maceration, which usually presents as soggy tissue at the lowest point of the wound.

Section 1. Health professional's knowledge regarding patient assessment for all wound types

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner should have sufficient training, knowledge and expertise before undertaking wound assessment	❖ Wounds can be multi-factorial and complex in their aetiology, assessment and treatment	❖ The practitioner should be able to demonstrate a level of expertise, through formal education and measured competence
❖ The practitioner should take a full social and medical history of the patient, including: • Presenting wound(s) • History of the wound(s) • Medical background (surgery, previous wounds, previous referrals, etc) • Drug history • Social background • Nutritional status • Psychological status • Patient's perspective	❖ These factors can provide information which may help to identify the cause of wounding and/or delayed healing. This can influence the choice of treatment/management given, ensuring that all the patient's needs are met	❖ Patient history and current status should be accurately documented in the patient's healthcare records
❖ The patient should undergo a basic assessment to determine the condition of the skin, e.g. is it dry, flaky, excoriated, discoloured or macerated?	❖ Skin assessment enables the correct and suitable preventative measure(s) to be commenced and ongoing treatment planned	❖ Evidence of skin assessment should be recorded within the patient's healthcare records
❖ Skin should be observed were appropriate for varicose veins, varicosities, acute and chronic oedema, skin conditions and skin staining. A more complex examination may be carried out depending on the speciality/competence of the practitioner	❖ Skin assessment also enables identification of any underlying disease process that may be responsible for wound development/chronicity and which may influence healing	❖ Specialist referral may be sought depending on assessment findings, and evidence of this should be documented within the patient's healthcare record
❖ The practitioner is able to anatomically describe wound location, accurately measure the size of the wound through the use of tracing/measurement or photography (according to local policy), describe wound bed appearance, exudate (volume, colour and viscosity), wound odour, pain and surrounding skin condition	❖ Accurate assessment of the wound provides a baseline against which to measure the progress/success of treatment	❖ Documentation provides evidence of a thorough wound assessment, treatment plan and ongoing evaluation of its success

Section 1. Health professional's knowledge regarding patient assessment for all wound types (cont...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ A thorough patient assessment should be carried out by a skilled and clinically competent practitioner adhering to local and national guidelines when appropriate	❖ The best possible evidence-based care should be readily available to all patients regardless of where their care is accessed. Providers should be able to support claims of providing best practice for both internal and external audit purposes	❖ Regular audits of routine practice should benchmark services against best practice/guidelines. Patient complaint and satisfaction surveys should be carried out locally and regionally
❖ Following assessment, the practitioner should be able to select the appropriate course of treatment for the wound, in terms of: • Wound dressing • Surrounding skin management • Exudate management • Specialist referral	❖ Patients should receive the appropriate treatment and have an individualised management plan in place	❖ Documentation of the treatment plan agreed between practitioner and patient will be recorded within the patient's healthcare records
❖ Specialist referral/advice should be made/sought when appropriate (e.g. if the practitioner's skills are not at a level to offer appropriate assessment, treatment and management and/or in accordance with local policy/guidelines)	❖ Specialist referral (e.g. to podiatrist, vascular surgeon, dermatologist, etc) should be made to aid diagnosis and optimise treatment outcomes	❖ Recognition and/or interventions of specialist referral should be recorded within the patient's healthcare records
❖ The practitioner will be aware of their responsibilities in the health education of the patient/carers	❖ Information both given and received engenders trust and respect and assists in achieving concordance with prevention and treatment plans	❖ When asked practitioner and patient/carer are able to demonstrate their understanding of their wound aetiology and fully participate with the care plan

SECTION 2. HEALTH PROFESSIONAL'S KNOWLEDGE REGARDING THE ASSESSMENT AND MANAGEMENT OF FOOT ULCERS IN PATIENTS WITH DIABETES

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner should have the ability to determine the causal factors of foot ulceration using thorough physical examination, history taking and knowledge of the factors which may have contributed to the development of the wound, such as: • Peripheral neuropathy • Peripheral vascular disease • Foot deformities • Pressure ulceration	❖ Early assessment and recognition of causal factors may prevent further deterioration/complications but may also accelerate treatment interventions	❖ There is documentary evidence of a comprehensive assessment, including the use of information derived from the patient, relative/carers and the multidisciplinary team, within the healthcare records
❖ The practitioner should have the ability the conduct a wound assessment (see Section 1)	❖ Accurate assessment of the wound provides a baseline against which to measure the progress/success of treatment	❖ Documentation provides evidence of a thorough wound assessment, treatment plan and ongoing evaluation
❖ The practitioner should be able to determine early signs of infection within the diabetic foot ulcer	❖ Patients with diabetes are atypical in presentation of infection	❖ Timely interventions which prevent the deterioration of foot ulceration are documented in the patient's notes
❖ The practitioner should have within their organisation the mechanism for referral to members of the multidisciplinary team, such as a podiatrist, vascular surgeon or orthotist, if their skills are not at a level to offer appropriate assessment, treatment and management	❖ Referral to members within the multidisciplinary team will facilitate a timely assessment, treatment and management plan. A delay in this process may negatively impact on the long-term outcome of the patient	❖ Documentation within the individual's healthcare records shows a clear path of referral and proposed plan of care

Section 3. Health professional's knowledge regarding the assessment and management of pressure ulcers

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner should have the ability to determine the cause of the wound by thorough physical examination, history taking and knowledge of the contributing factors of pressure ulceration: • Extrinsic factors: pressure, shear, friction, moisture • Intrinsic factors: physical/medical condition, nutrition, medication, age, mobility, continence	❖ Determining the cause(s) of ulceration is key to both management and prevention of pressure damage in the future	❖ There is documentary evidence of a comprehensive assessment, including the use of information from the patient, relative/carer and multidisciplinary team, present within the patient's healthcare record
❖ Physical examination should include calculation of the patient's body mass index as part of a nutritional assessment and any recent significant weight loss should be considered	❖ Malnutrition is a contributory factor towards pressure ulcer development	❖ The findings of the nutritional assessment will be recorded within the individual's healthcare record
❖ The practitioner should be able to grade the pressure damage according to the European Pressure Ulcer Advisory Panel Scale (EPUAP, 2008), though other scales may be used according to local policy	❖ The use of a recognised grading scale enables all members of the multidisciplinary team to be aware of the severity of the pressure damage	❖ Documentation exists of the pressure ulcer grading according to EPUAP Scale, or other scale according to local policy
❖ The practitioner is able to carry out a full wound assessment (as outlined in Section 1)	❖ Assessment provides an accurate baseline against which treatment plans and long-term management can be measured	❖ Accurate documentation will provide evidence of thorough assessment, treatment plan development and evaluation
❖ The practitioner will make an assessment of extrinsic factors which may cause or prolong pressure damage. Evaluation should consider: • Appropriateness of seating used • Quality and appropriateness of mattress used • The use of lifting and handling equipment • The provision of aids such as heel protectors and cushions to prevent complications arising from reduced mobility	❖ Extrinsic factors can directly impact on the development and deterioration of pressure ulcers. Resources such as seating, mattresses, and heel protectors can aid healing/ prevent ulceration if the provision made is appropriate to the individual patient and their wound	❖ Patient's healthcare records show evidence of equipment assessment and the resultant management plan

Section 3. Health professional's knowledge regarding the assessment and management of pressure ulcers (cont...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner will be aware of their responsibilities in the health education of the patient/carer(s)	❖ Information both given and received engenders trust and respect and assists in achieving concordance with pressure damage prevention and treatment plans	❖ When asked, the practitioner and patient/carer are able to demonstrate their understanding of their pressure ulcer risks and fully participate in the care and treatment plan
❖ The practitioner should have the knowledge and ability to select the most appropriate wound treatments for an individual with a pressure ulcer. The plan should consider: • Analgesia as appropriate • Antibiotic therapy, if infection is present • Pharmacological therapy for the treatment of underlying medical conditions • Wound dressing, to provide a moist, wound healing environment	❖ Patients should receive the most appropriate wound treatments tailored to their needs as an individual	❖ Thorough assessment and documentation of a treatment plan with accompanying rationale can be reviewed in the patient's healthcare records

Section 4. Health professional's knowledge regarding the assessment and management of leg ulceration

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner should have the ability to determine the cause(s) of the wound by thorough physical examination, history taking and knowledge of the factors contributing to leg ulceration	❖ Determining the cause(s) of leg ulceration is key to both management and future prevention of wound development	❖ Documentation of a comprehensive assessment, including information gained from the patient, relative/carers and multidisciplinary team, is present in the healthcare record
❖ The practitioner will cover medical/surgical history during assessment. This includes: surgical procedure and any post-operative complications, especially orthopaedic surgery/ trauma to affected limb, history of deep vein thrombosis, pulmonary embolism or haemoptysis, phlebitis, cellulitis and family history of venous or arterial ulceration. Assessment should also consider evidence for arterial pathology, such as previous arterial disease history, hypertension, cardiovascular accident, transient ischaemic attack, description of claudication on mobilisation or at rest, diabetes, rheumatoid disease and family history of non-venous ulcers	❖ Patients with either venous or non-venous ulceration often have a readily recognised clinical set of signs and symptoms which will indicate the aetiology of their disease (RCN, 2006). This can help to identify appropriate assessment and treatment options and support referral to other specialist services	❖ Assessment and management rationale should be recorded within the patient's healthcare records
❖ The practitioner will undertake or request relevant clinical investigations as part of the history and assessment of the ulceration:		
• Blood pressure	• To establish the absence of undiagnosed hypertension /cardiovascular disease which can contribute to the formation of ulcers or add to delayed healing actors (RCN, 2006)	• Documentation of a blood pressure within normal range or medical referral if outside these limits, is present within the health record
• Weight	• Obesity exacerbates venous hypertension and will require intervention by practitioner and patient (RCN, 2006)	• Documentation of patient's weight and appropriate plan of care if outside normal range is present within the health record
• Urinalysis and random blood sugar	• To establish the absence of undiagnosed diabetes (RCN, 2006)	• Documentation of normal range of blood sugar and an appropriate plan and medical referral if outside normal range is present within the health record

SECTION 4. HEALTH PROFESSIONAL'S KNOWLEDGE REGARDING THE ASSESSMENT AND MANAGEMENT OF LEG ULCERATION (CONT...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ Doppler ultrasound; ankle/brachial or toe/brachial pressure index (ABPI or TBPI) or pulse oximetry index	❖ To check for the presence or absence of arterial disease which will influence treatment plan and management (RCN, 2006)	❖ Documentation of initial readings and review of results, will determine the plan of action to be taken, and will be recorded in the healthcare records
❖ An ABPI or TBPI or pulse oximetry should be repeated at 3-monthly intervals or earlier when the patient reports a change in symptoms suggestive of progression of arterial disease, i.e. increased pain	❖ To ensure there is no change in the patient's vascular status during treatment. Patients with a venous leg ulcer may also develop arterial disease, which may alter compression treatments (RCN, 2006)	❖ Continued documentation and recording of patient reported symptoms and 3-monthly vascular test results are recorded within the patient's healthcare records
❖ Physical examination should include the whole limb including the presence of obvious varicose veins/varicosities, acute or chronic oedema, skin conditions and skin staining	❖ To establish the signs and symptoms of disease that will contribute to determining the aetiology of the leg ulcer, which may influence the treatment plan	❖ Comprehensive documentation of examination of the limb is recorded with the healthcare records
❖ The practitioner will make an assessment of leg ulcer history which should include duration of the ulcer, its location and size using tracing and/or photography (with consent according to local policy) estimation of the amount and type of tissue present, and a description of the condition of the surrounding tissue	❖ To provide a baseline of information for assessment of intervention efficacy. Duration of ulcer and type of tissue present have been shown to directly relate to intransigience (RCN, 2006)	❖ Comprehensive documentation of the assessment is present within the healthcare records

Section 4. Health professional's knowledge regarding the assessment and management of leg ulceration (cont...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner, following assessment, should be able to select the appropriate course of treatment for the leg ulceration, incorporating: • Wound dressing • Compression therapy • Maceration/excoriation of surrounding tissue • Exudate management • Specialist referral	❖ Patients should receive the appropriate treatment and management plan	❖ Documentation of the treatment plan agreed between practitioner and patient will be recorded within the patient's healthcare records
❖ Practitioners should refer the patient for specialist medical assessment for: • Recurrent venous ulceration • Ulcers of non-venous aetiology • Suspected malignancy • Abnormal increase or decrease in APBI or TBPI, or pulse oximetry readings • Newly diagnosed diabetes • Severe contact dermatitis • Ischaemic foot or limb • Infected foot or limb • Uncontrollable pain • Non-healing ulcers despite compliance with therapy	❖ Practitioners should recognise the boundary of their knowledge	❖ Thorough assessment and documentation of a treatment plan with accompanying rationale is present within the healthcare records

SECTION 5. HEALTH PROFESSIONAL'S KNOWLEDGE REGARDING THE ASSESSMENT AND MANAGEMENT OF SURGICAL WOUNDS

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner should have access to the relevant information regarding the type of surgical procedure undertaken, rationale for surgery and expected clinical outcomes	❖ Understanding of the surgery undertaken will help the clinician when formulating an assessment	❖ There is documentary evidence of surgical procedure undertaken
❖ The practitioner should have the ability to determine surgical wound complications, such as: • Infection • Dehiscence • Healing by secondary intention • Maceration/excoriation of surrounding tissue	❖ Early identification of surgical wound complications may reduce their severity	❖ Patient's healthcare records document any identified wound complications
❖ Initial assessment of the wound's bioburden, including critical colonisation, local infection and spreading infection should be undertaken. Microbiological swabs will be taken if the patient/wound displays signs of local or spreading infection, including: • Pyrexia • Inflammation/cellulitis/erythema • Increased pain • Increase in volume and viscosity of exudate • Rapid deterioration of the wound • Malodour • Discolouration of granulation tissue • Delayed healing (Cutting and White, 2004)	❖ Critical colonisation/infection will delay healing and cause distress to the patient. Early recognition of these states may lead to changes in treatment	❖ Documentation of the clinical examination, a record of swab taken and results is recorded within health care records. Initiation of antibiotic therapy if infection presence
❖ Wound dehiscence may occur when skin staples or sutures are removed, or between staples/sutures before their removal. Dehiscence may occur due to infection or tension on the wound edges, e.g. from interstitial oedema or obesity	❖ Wound dehiscence will delay healing and further surgical intervention may be required	❖ Evidence of assessment and treatment planned will be present within the individual's healthcare records

Section 5. Health professional's knowledge regarding the assessment and management of surgical wounds (cont...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ A wound may be left open to heal by secondary intention due to the presence of: • Infection • Necrotic/devitalised tissue • Trauma to existing tissue • Oedema/swelling • Bleeding/haematoma • Sinus/fistula	❖ The healing of a wound by secondary intention enables the practitioner to treat and remove complications which may delay closure and optimise the wound's potential to heal by applying the appropriate treatment rationale	❖ Evidence within the patient's healthcare records will demonstrate an understanding of the reasons for leaving the wound to heal by secondary intention, and the treatment plan
❖ The practitioner is able to carry out a full assessment of the wound, which considers: • Location • Accurate measurement of wound dimensions, including depth if appropriate • Wound bed appearance • Exudate levels and viscosity • Wound pain and condition of surrounding skin • Patient's pain, using recognised pain assessment tool	❖ Assessment provides an accurate baseline against which treatment plans and long-term management can be measured	❖ Accurate documentation will provide evidence of a thorough assessment, treatment plan and ongoing evaluation
❖ The practitioner will be aware of their responsibilities in the health education of the patient/carers	❖ Information both given and received engenders trust and respect and assists in achieving concordance with treatment plans	❖ When asked the practitioner and patient/carer are able to demonstrate their understanding of their wound aetiology and fully participate in the care and treatment plan
❖ The practitioner should have the knowledge and ability to select the most appropriate wound treatments for an individual with a surgical wound. Based on: • Appropriate analgesia • Antibiotic therapy, if infection is present • Pharmacological therapy, for the management of any underlying conditions • Wound dressing capabilities	❖ The patient should receive the most appropriate wound treatments for them as an individual, based on assessment	❖ Thorough assessment and documentation of a treatment plan with accompanying rationale can be reviewed within the patient's healthcare records

Section 6. Health professional's knowledge regarding the assessment and management of trauma wounds

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ Assessment should be carried out to determine the cause of the skin trauma: • Skn tear/flap • Graze/abrasion • Lacerations • Penetration/stab wound	❖ Early identification of skin trauma through identification of the cause may prevent further skin breakdown	❖ Healthcare records have evidence that assessment has been carried out to determine cause of trauma and cause removed
❖ Skin tears should be classified according to the degree of tissue damage (Beldon, 2006)	❖ Classification of the damage enables correct and suitable treatment and intervention to be initiated and maintained	❖ Healthcare records show that the individual with a skin tear has undergone a full assessment, and that a plan of management has been developed: this incorporates a review of the wound and continuity of care between different care settings
❖ Management of a skin tear should aim to: • Stop persistent wound bleeding • Prevent infection • Minimise pain and discomfort • Recover skin integrity	❖ Prevention of post-trauma complications will optimise wound healing	❖ Evidence of initial and ongoing management to prevent further tissue damage should be evident
❖ Management of a skin tear involves maintaining skin integrity: • If the skin flap has dried out, remove it using a sterile technique • If the skin flap is still viable, cleanse with warmed saline or tap water, and roll the flap back in place, to obtain optimum skin cover • Secure skin, with either paper skin strips, skin glue, silicone non-adhesive and an appropriate dressing	❖ Treatment and management of a skin tear is based on maintaining the integrity of the skin	❖ Treatment interventions and plan of care should be evident within the individual's healthcare records

Section 6. Health professional's knowledge regarding the assessment and management of trauma wounds (cont...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ Management of the graze/abrasion should aim to: • Stop persistent wound bleeding • Remove any debris or wound contamination • Prevent infection • Minimise pain and discomfort	❖ Removal of debris and/or wound contaminants may help to prevent a delay in healing	❖ On clinical examination the wound is free of any debris or contaminants
❖ Management of lacerations and penetration/stab wounds involves thorough assessment to determine the extent of injury since underlying structures may have been damaged	❖ These wounds may be minor in appearance but underlying structures may be damaged which could potentially be life-threatening	❖ Evidence of assessment and any investigations should be recorded within the patient's healthcare records
❖ The practitioner should have the knowledge to determine when referral to members of the multidisciplinary team, e.g doctor or surgeon, should be made, especially in the event of a clinical emergency	❖ Patients should receive the most appropriate wound treatment for them as an individual	❖ Thorough assessment and care planning with rationale is recorded within the patient's healthcare records
❖ The practitioner should have the knowledge and ability to select the most appropriate treatment for the wound	❖ Patients should receive the most appropriate wound treatment for them as an individual	❖ Thorough assessment and care planning with rationale is recorded within the patient's healthcare records

SECTION 7. HEALTH PROFESSIONAL'S KNOWLEDGE REGARDING THE ASSESSMENT OF WOUND EXUDATE

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ An accurate assessment should be carried out to determine the true nature of the exudate, including: • Colour • Volume • Viscosity • Odour	❖ Variations in these factors can provide clues to underlying aetiology, and assessment also provides an accurate baseline against which treatment plans and long-term management can be measured	❖ A record of exudate colour, volume, viscosity and odour will be recorded within the patient's healthcare records
❖ The practitioner will make an assessment of the wound to determine the type/cause of wound exudate: • Acute (normal) wound exudate • Chronic wound exudate • Infection • Fistula • Wound oedema • Bleeding	❖ Early identification of the cause of exudate may prevent deterioration of the wound and avoid potential life-threatening complications for the patient	❖ Assessment and action taken should be recorded within the patient's healthcare records
❖ Due to the normal pathophysiology of the wound the presence of exudate is normal (WUWHS, 2007). Acute wound exudate should be low viscosity, clear/straw in colour and may vary in volume due to the size and depth of the wound	❖ Staff should be aware of what constitutes normal exudate and normal volumes according to the wound size and depth	❖ When asked the practitioner/carer is able to demonstrate their understanding of exudate colour, volume and cause
❖ The practitioner should record levels of exudate loss, either as a frequency of dressing change or by collection of wound fluid over a specified period of time	❖ Fluid loss will directly affect fluid balance and may lead to dehydration and possible chronic renal failure, especially in the elderly	❖ Accurate documentation within the patient's healthcare records shows awareness of exudate volumes and fluid loss
❖ The practitioner will have the ability and skills to select the most appropriate wound treatment, according to exudate levels: • Hydrocolloids • Hydrofiber • Alginates • Foam • Gelling foam • Negative pressure wound therapy • Wound managers	❖ Patients should receive the most appropriate wound treatment for them as an individual	❖ Thorough assessment and documentation of a treatment plan with accompanying rationale is present within the patient's healthcare records

Section 8. Health professional's knowledge regarding the assessment of wound exudate: complications

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ A sudden increase in exudate volume and viscosity/purulence may indicate infection and may be accompanied by the following symptoms: • Pyrexia • Inflammation/cellulitis/erythema • Increased pain • Rapid deterioration of the wound • Malodour • Microbiological swabs will be taken if the wound shows signs of local or spreading infection	❖ Critical colonisation/local infection/spreading infection will delay healing and cause distress to the patient. Early recognition of these states may lead to changes in treatment	❖ Documentation of the clinical examination, a record of the swab taken and microbiology results are present within the healthcare records. Antibiotic therapy should be initiated if infection is present
❖ The practitioner should have the knowledge and ability to select the most appropriate treatment for the individual with an infected wound: • Antibiotic therapy • Analgesia • Topical antimicrobials • Absorbent/fluid-handling treatments • Peri-wound protection	❖ Patients should receive the most appropriate wound treatment for them based on their individual needs	❖ Evidence of treatment and rationale will be recorded within the patient's healthcare records
❖ The presence of a fistula may be indicated when exceptionally high volumes of low viscosity, yellow/brown exudate is evident (WUWHS, 2007). This exudate may also be foul smelling, indicating the presence of bile/faecal enzymes. This requires immediate referral to the patient's medical/surgical team for further investigation	❖ Patients with a fistula should be referred to the appropriate medical/surgical team. Management will be determined by assessment and review within the multidisciplinary team in conjunction with the patient	❖ Treatment plan and rationale will be recorded within the patient's healthcare records
❖ Wounds and surrounding tissue may be oedematous, due to surgery, an underlying medical condition or complications. Oedema is indicated by tissue distension and/or tautness	❖ The presence of tissue oedema may lead to delayed healing, delayed wound closure and distortion of the patient's fluid balance. Treatment should be based on expected clinical outcomes	❖ Documentation shows evidence of a management plan for the treatment of wound oedema based on expected and achievable clinical outcomes

SECTION 8. HEALTH PROFESSIONAL'S KNOWLEDGE REGARDING THE ASSESSMENT OF WOUND EXUDATE: COMPLICATIONS (CONT...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner should have the skill, knowledge and expertise to determine if blood present within the wound is: • Fresh blood • Dark coagulated blood which may be part of the wound debridement process	❖ The presence of blood within a wound is a symptom of underlying trauma to the wound bed (WUWHS, 2007). Care should be taken, and specialist referral considered	❖ The wound should be free of blood, and treatment to remove contamination must be recorded within the individual's healthcare record
❖ The practitioner should have the skill and knowledge to determine if the blood present is fresh and frank, and increasing in volumes. This event would be regarded as a clinical emergency and the patient should be referred for immediate medical review	❖ The presence of fresh blood in increasing volumes can be life-threatening	❖ Healthcare records shows evidence of immediate medical referral and any action taken
❖ The practitioner should have the skill, knowledge and expertise when dealing with a wound which presents with dark coagulated blood to determine if specialist referral is necessary	❖ The presence of dark coagulated blood may be superficial and due to initial injury but may also be indicative of haematoma, which may require specialist referral	❖ Health records show evidence of treatment and management of the wound based on the assessment of the degree of blood present within the wound
❖ The presence of medium/high exudate volumes may lead to changes to the peri-wound skin, including: • Maceration • Excoriation	❖ Protection of peri-wound skin is based upon appropriate assessment of exudate levels and the commencement of appropriate treatment	❖ Evidence of wound assessment and rationale will be recorded within the patient's healthcare records
❖ The practitioner will be able to identify maceration as the presence of a white 'soggy' margin around the wound	❖ Maceration is detrimental to wound healing and may increase the wound size as well as delay healing (Vowden and Vowden, 2004)	❖ The presence of macerated tissue should be quickly identified and appropriate interventions taken to limit potential tissue damage. Intervention taken must be recorded within the patient's healthcare records

Section 8. Health professional's knowledge regarding the assessment of wound exudate: complications (cont...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ Maceration of the peri-wound tissue resulting from exudate may be exacerbated by: • Inappropriate dressing selection (dressing selected must have exudate handling capability) • Incorrect wear time of dressing (dressing wear time must be realistic) • Gravitational forces	❖ Inappropriate dressing selection and/or inadequate frequency of dressing change can lead to maceration of the periwound tissue	❖ The practitioner can demonstrate effective change in treatment/management protocol
❖ The practitioner will have the ability, knowledge and understanding of wound care products to ensure that products selected are fit for purpose	❖ If the patient is experiencing complications from poor product selection or unrealistic wear times, wound healing will be delayed and patient concordance compromised	❖ The practitioner must be able to justify their treatment rationale
❖ Wounds subjected to gravitational forces display a larger area of tissue maceration at the lowest point of the wound	❖ Gravity forces the exudate to pool at the wound's lowest point resulting in maceration	❖ Healthcare records show evidence of limb elevation or alteration in the patient's position and the care delivered
❖ The practitioner should have the knowledge and skills to identify the presence of peri-wound excoriation. Excoriation of peri-wound tissue may be due to: • Chronic wound exudate • Infection • Fistula	❖ Excoriation of the peri-wound skin is detrimental to wound healing. It can also be distressing and painful for the patient	❖ The presence of tissue excoriation should be quickly identified and appropriate interventions taken to prevent wound disruption and distress to the patient

Section 9. Health professional's knowledge regarding Versiva® XC™ gelling foam dressing

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner should have the skill and knowledge to support the basic fundamentals of the principles of moist wound healing	❖ Moist wound healing has been shown to improve healing outcomes (Bishop et al, 2003)	❖ The practitioner can describe the principles of moist wound healing
❖ The practitioner will have the appropriate skills to conduct a full assessment of the wound, including: • Cause • Location • Size and depth • Tissue types present in the wound bed • Infection • Exudate • Pain • Peri-wound area • Odour	❖ To provide a baseline of information for assessment of intervention efficacy and support ongoing systematic review	❖ Evidence of wound assessment and rationale will be recorded within the patient's healthcare records
❖ The wound should be cleansed with either warmed tap water or saline, according to local policy/guidelines only if any debris or contaminants are evident within the wound bed, before any treatment application	❖ To avoid delayed healing by prolonging the inflammatory phase. To remove exudate from the peri-wound area	❖ Documentation of method of cleansing, if required, should be recorded within the patient's healthcare records
❖ The practitioner will as part of the wound assessment be able to determine if the wound is suitable for the application of Versiva XC dressing. The product may be used in conjunction with other absorbent primary wound care dressings	❖ Versiva XC dressing is a moisture-handling dressing which can be used as either a primary or as a secondary dressing with other moisture absorbing products. It should not be applied to a dry wound with no exudate, and is indicated for use in moderately to heavily exuding wounds	❖ Healthcare records show clear documentation of rationale for the selection of Versiva XC gelling foam dressing
❖ The practitioner will ensure that the application, treatment and removal of Versiva XC dressing is not detrimental to the wound or the patient: • The dressing should not result in pain on application, during treatment and/or on removal	❖ If the patient is experiencing any complications, wound healing may be disrupted and patient concordance lost: • If pain is present this may indicate poor dressing technique, inappropriate dressing choice or the possibility of infection	❖ Early identification of any dressing complications must be acted upon and records should document a change in rationale • Healthcare records show a plan of care that has been amended in response to the patient's experience of pain

Section 9. Health professional's knowledge regarding Versiva® XC™ gelling foam dressing (cont...)

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner must be able to identify the cause of wound odour	❖ The presence of odour may be due to dressing interacting with the wound or may indicate the presence of infection	❖ Recognition of odour and the action taken to resolve it will be recorded with the patient's healthcare record
❖ Use of the dressing should not result in peri-wound maceration/excoriation	❖ The presence of maceration/excoriation is detrimental to wound healing and is indicative of the need for a review of the current treatment regimen to ensure the most appropriate Versiva XC dressing type is being used for wound type, e.g. adhesive or shaped, that frequent dressing changes are carried out and that Versiva XC dressing is used in conjunction with a primary absorbent dressing if required	❖ Health records demonstrate treatment rationale based on reducing peri-wound skin complications. There will be evidence in the healthcare records of treatment rationale review/change
❖ The dressing should not result in skin stripping and peri-wound trauma on removal	❖ Stripping of the peri-wound skin may occur when using bordered dressings	❖ Evidence of assessment and review of treatment will be recorded within the patient's healthcare records
❖ The dressing should not leak	❖ Leakage may indicate that the dressing does not conform to the wound contours/shape or that it is not being changed frequently enough to cope with the amount of exudate produced	❖ The practitioner should be able to identify the reasons for leakage, e.g. inappropriate dressing selection or an increase in exudate production
❖ The practitioner will have the knowledge and skills to safely apply Versiva XC gelling foam dressing, plan ongoing review and identify any complications	❖ Patient safety, comfort and concordance must be maintained	❖ The practitioner will be able to demonstrate their knowledge of the treatment applied and associated plan of care adopted
❖ Conformability of Versiva XC dressing may be affected by the anatomical location of the wound. Versiva XC Adhesive Sacrum or Adhesive Heel dressings may be more effective in these difficult to dress areas	❖ The use of Versiva XC Adhesive Sacrum or Adhesive Heel dressings may contour and conform better to the wound helping to preventing potential complications	❖ Healthcare records will demonstrate evidence of the suitability of the selection of dressing type for the wound type, location and local conditions
❖ The practitioner will have the ability, knowledge and understanding to explain the principles of wound healing, dressing type selected and review process to the patient	❖ Patients/carers should be suitably informed and involved in the decision-making process	❖ When asked the patient will be able to convey the principles behind their wound treatment

Section 10. The use of Versiva® XC™0 gelling foam dressing as a primary dressing

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner will have the ability, knowledge and understanding of Versiva XC dressing to determine its suitability as a primary dressing	❖ Dressing selection should be based on systematic wound assessment and treatment aims and objectives	❖ Evidence of the understanding of wound objectives must be demonstrated by the practitioner
❖ The practitioner will have the skills and knowledge to determine if Versiva XC dressing is meeting the established treatment objectives upon review	❖ To ensure appropriate and cost-effective treatment interventions	❖ Healthcare records should note dressing change and wound assessment at regular intervals
❖ The practitioner will have the skills to consider possible changes in the condition of the wound and patient, including: • Maceration/excoriation of peri-wound skin • Deterioration of wound bed tissue • An increase or reduce in exudate volume	❖ Product may not be appropriate for all wounds and through all stages of wound healing therefore ongoing reassessment is essential. Dressing may perform differently in conjunction with other products	❖ Healthcare records show systematic review and understanding of rationale
❖ The frequency with which the wound is reassessed will depend upon wound condition, wound type and levels of exudate	❖ Each wound must be considered individually and reviewed accordingly	❖ Dressing changes are recorded within the healthcare records, and deviations from the treatment plan are clearly noted
❖ Versiva XC dressings should be changed when clinically indicated, but can be worn for upto 7 days (according to package insert). Wear time is determined by wound type, infection, and volume of exudate. Diabetic wounds should be changed at least every 2–3 days. Infected wounds and highly exuding wounds should be reviewed at regular intervals. However, if assessment permits, the dressing can be left on for a maximum of 7 days	❖ Frequency of dressing change will be based on systematic review according to the condition of the patient and their wound condition. Longer wear-time may be achieved if Versiva XC dressing is used in combination with other wound care products, e.g. in heavily exuding wounds	❖ Rationale for review should be recorded within the patient's healthcare records

Section 11. The use of Versiva® XC™ gelling foam dressing as a secondary dressing

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner will have the ability, knowledge and understanding of Versiva XC dressing to determine its suitability as a secondary dressing for use in association with other absorbent/moisture-handling primary dressings	❖ Dressing selection should be based on treatment aims and objectives	❖ Evidence of the understanding of wound objectives must be demonstrated by the practitioner
❖ The practitioner should avoid using Versiva XC dressing in association with non-absorbent dressings	❖ The use of non-absorbent primary dressings may alter the fluid handling capability of Versiva XC gelling foam dressing and this may be detrimental to wound healing and expected product performance	❖ Healthcare records show a clear and concise understanding and rationale behind the use of Versiva XC dressing in association with other suitable wound care dressings
❖ The practitioner will have the skills and knowledge when reassessing the wound to determine if Versiva XC dressing is providing an environment that facilitates wound healing	❖ To ensure appropriate and cost-effective treatment interventions	❖ Healthcare records should note dressing change and wound assessment at regular intervals
❖ The practitioner will have the skills to consider possible complications arising from treatment: • Maceration/excoriation of peri-wound skin • Deterioration of wound bed tissue • Increase or decrease in exudate volume	❖ The product may not be appropriate for all wounds and through all stages of wound healing and therefore ongoing review is essential. The dressing may perform differently in conjunction with other products	❖ Healthcare records show systematic review and understanding of rationale
❖ The frequency of dressing change will be based on the levels of exudate within the wound, and other factors such as the presence of infection and if the patient is diabetic or has other conditions that put them at risk of wound deterioration	❖ Frequency of dressing change will be based on systematic review according to the overall condition of the patient and their wound	❖ Rationale for review should be recorded within the patient's healthcare records

SECTION 12. THE APPLICATION OF VERSIVA® XC™ DRESSING UNDER COMPRESSION THERAPY

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ The practitioner will have the ability, knowledge and understanding of the possible complications associated with all forms of compression therapy	❖ If applied without full aetiological assessment and/or inappropriately, ischaemic damage to the limb may occur	❖ The practitioner should be able to demonstrate a level of expertise in assessment, treatment and management of compression therapy through formal education and measured competencies
❖ Damage to the peri-wound area can occur when using any edged dressings under compression. Therefore any dressings selected must have either a bevelled edge, such as Versiva XC dressing, or be flat with no edge	❖ Some products' edges are raised which when applied under compression can cause peri-wound pressure, therefore the application of such products is contraindicated under compression bandaging	❖ Products selected should have a flat or bevelled edge
❖ The practitioner will be able to select between Non-Adhesive and Adhesive Versiva XC dressings for use beneath compression for each individual. Choice should be based upon the findings of patient assessment, wound location, patient mobility and surrounding skin integrity	❖ Patients who are mobile or where the wound is on a non-flat surface such as the sacrum or heel, may benefit from the use of an adhesive Versiva XC dressing, such as Adhesive Square, Adhesive Sacral or Adhesive Heel. If the peri-wound area is friable, the Non Adhesive dressing should be used	❖ Health records will show evidence of assessment and rationale to demonstrate why the treatment regimen was selected
❖ The practitioner will assess the patient's skin at each dressing change for signs of pressure damage arising from either wound dressings or compression therapy	❖ To assess for early signs of compromised tissue and to take remedial action	❖ A regular assessment of the skin is undertaken and recorded in the health care records
❖ When using Versiva XC dressing either as a primary or secondary dressing under compression for the first time, the dressing's performance should be reviewed within 24 hours	❖ This will provide an accurate assessment of its fluid-handling capability, thus determining the frequency of dressing change required and will reduce the risk of peri-wound complications	❖ Evidence of initial assessment, re-review and ongoing management will be recorded within the patient's healthcare records, along with the frequency of dressing change

Section 13. Patient and/or carer education relating to Versiva® XC™ gelling foam dressing

Statement	Reason for statement	How to demonstrate statement is being achieved
❖ All patients and/or carers will be provided with appropriate information in accessible formats to cover all aspects of their treatment, including the rationale for using Versiva XC dressing	❖ An informed patient/carer is more likely concord with treatment	❖ Patients and/or carer will be asked if they are satisfied with the information provided to them
❖ The practitioner should ensure that patients and/or carers fully understand the role of Versiva XC gelling foam dressingand/or other selected treatments in accordance with the manufacturer's instructions (please see directions for use in package insert)	❖ To ensure optimum performance of the Versiva XC dressing thus helping to achieve expected clinical outcomes	❖ Patients and /or carers demonstrate an understanding of the therapy and its role in wound management

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