

# A simple evaluation of a new dressing

## ActiFormCool AFC004

### based on action research methods

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**Introduction:** Wound healing is a complex biological process and it is imperative for every clinician, involved in wound care, to know the process which prevents, minimizes and eliminates factors which adversely affect wound healing (Gogia 1992). Wound dressings can have a profound effect on the repair process and patient quality of life (Kerstein 1995). Among the many categories of advanced wound dressing products available today, hydrogels are popular because they are effective, comfortable, easy to use, and cost effective and, with proper use, these agents provide control of wound surface hydration, sometimes absorbing excess exudate and often providing moisture (Eisenbud et al. 2003; Thomas and Hay, 1995).

**Challenges within wound care:** The major challenge in wound care is preparing the wound bed to heal. The chronic wound is often non-healing and filled with bacteria laden slough. The simplest and possibly safest form of wound debridement with the highest success rate is through autolysis where a dry necrotic wound is deliberately made wet, thereby rehydrating it until the dressing and the body's defenses can remove the devitalized tissue. To provide a highly moist environment, dressings are specifically selected that will either 'wet' the wound or hold wound fluid in the wound bed and an appropriate dressing for both these purposes are hydrogels. Certainly, debridement, using a hydrogel appears to be more effective than standard wound care for healing diabetic foot ulcers (Scanlon 2003).

**Challenges for the nurse:** The wound itself, and type of dressing to be used, is the last consideration and discovery of all factors affecting healing should precede examination of the wound. It is also important to discover, and understand, the patient's own perception of their wound problems, particularly as this is rarely the wound itself. Pain is often a major concern for patients with chronic wounds and pain relief should be considered when choosing a dressing.

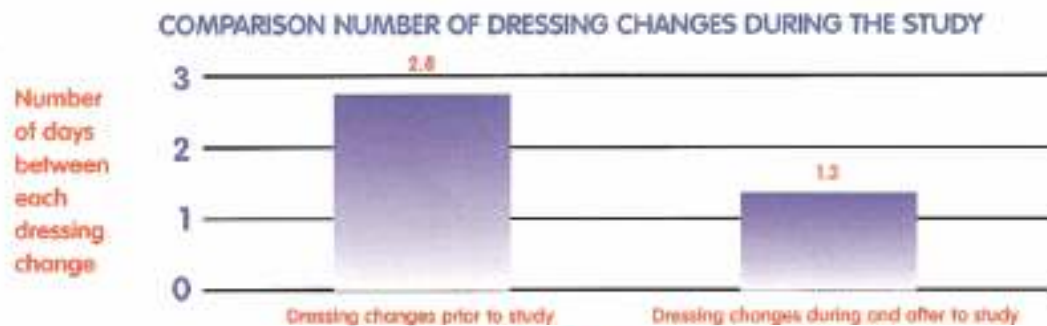
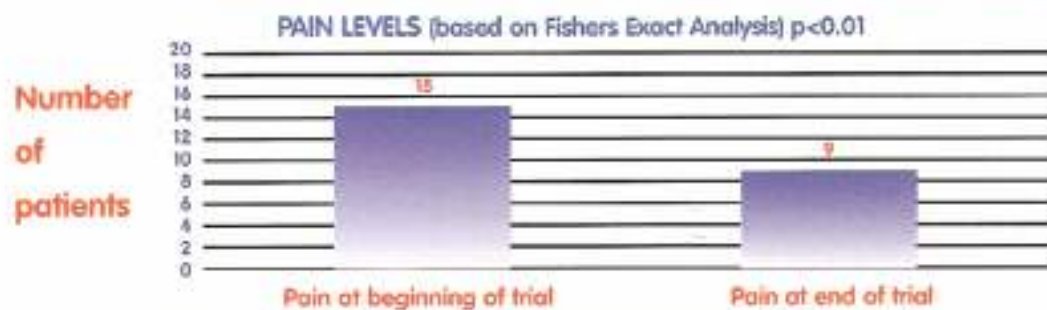
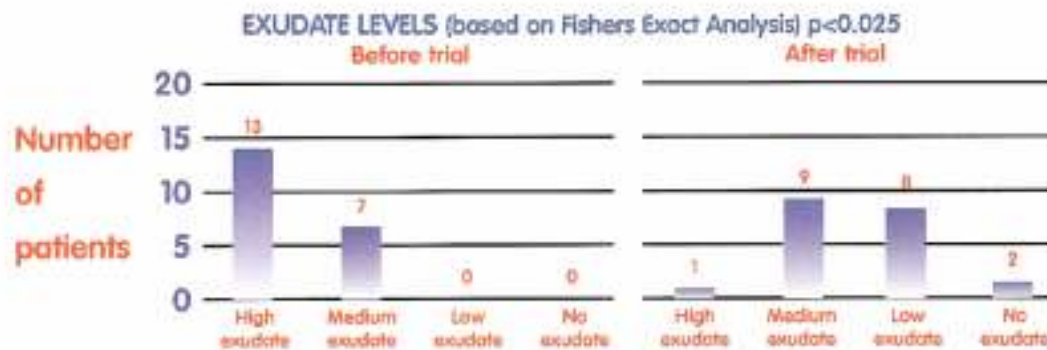
**Background information on ActiFormCool:** ActiFormCool is a range of non-adhesive, high water content hydrogel products. They are two-sided, clear, transparent hydrogels formed around a supporting blue Polyethylene matrix. The gel contains approximately 70% water and is permeable to water vapour, gases and small protein molecules, but impermeable to bacteria.

ActiFormCool provides a moist environment at the surface of the wound. Provided that the dressing is not allowed to dry out it will not adhere to the underlying tissue upon removal. If the dressing does dry out it is easily rehydrated to prevent tissue damage. ActiFormCool may be placed directly onto the surface of an exuding wound and held in place with tape or a bandage, as appropriate. On dry wounds the dressing film liner may be left in place to provide occlusion. On wet wounds the film would be removed to increase absorption.

**The study methods:** To ensure a wide spectrum of wounds was included in this small study, any patient with a wound, with (or without) compression bandaging, and that has shown little evidence of healing to date, was included in the study.

- 18 patients were assessed for the study.
- 20 wounds and 16 patients were included.
- 2 patients were discontinued from the trial as they became unhappy with the change in care. No reason was given but these patients were apparently often 'difficult' or 'non-concordant' according to the nurses.
- Obtaining the subjects for the evaluation was from nursing homes, private referrals and district nurses.
- Each subject was provided with a full explanation of the study and was only admitted to the study if they agreed to the terms.
- Each subject was given time to discuss their problems with the wound and assisted with developing aims for their individual case study. These aims were then used to assess whether ActiFormCool was clinically effective.
- Photographs are very powerful evidence of wound healing rate and therefore, visits and photographs were undertaken weekly by the evaluating team. Any wound care required during the interim period was provided by the responsible primary nurse. Dressings were provided so that care could be continuous.
- Pain was assessed on a recognised scale of 1-10 with 10 being the worst pain to possibly experience and 1 = no pain. The scale was 10cm in length and was provided on a laminated card.
- Each leg ulcer was assessed for venous/arterial insufficiency with Doppler. If the outcome of the assessment indicated venous, then orthopaedic wool and short-stretch compression was applied over the dressing. If venous leg ulcers were not the problem, then the secondary dressing was decided by the Tissue Viability Consultant (TVC).
- The evaluation was to be 5 – 7 assessments over a 4 to 6 week period (depending on the patient's own requirements) or to healing if that came first. There was a continuation of dressing supply to those patients who's wounds were assessed by the district nurse and TVC and the assessment results suggested that discontinuation of ActiFormCool could lead to reduction in healing. Therefore, some subjects were continued after the trial period ended and these are included within this study.





#### Results:

These are presented in bar charts depicting Fishers Exact Analysis.

Dressing change times were reduced from 60 visits weekly for all 20 patients to 35 (average 1.75 visits per patient) weekly for all 20 patients. This is a reduction of 58% in visits. Netton et al. (1998) costed district nurse visits at £49 per visit and this means a cost-saving of £61.25 per patient per week.

The wounds often 'speak for themselves' as photographic evidence. The following pictures are from the 20 case studies and show changes in healing and reduction in slough.

**Investigation included:** Pain; exudate levels; ease of use; ease of removal, use under compression bandages, healing, skin improvement and cost-effectiveness (identified through number of nurse visits).

During the study, it was important to develop knowledge of how the dressing could or should be used and so the methodology was based on Action Research. Action Research is a three-step spiral process of:

- (1) planning
- (2) taking actions
- (3) evaluation or fact-finding about the results of the action (Lewin 1947)
- (4) re-planning according to the results found in the evaluation

It is also the process by which practitioners attempt to study their problems scientifically in order to guide, correct, and evaluate their decisions and actions and is a fancy way of saying 'let's study what's happening and decide how to improve' (Calhoun, 1994) and this method enabled TVCS to evaluate the study as it progressed and make changes to the use of ActiFormCool, as necessary.

**Conclusion:** ActiFormCool was easy to use, allowed pain free removal, assisted with reducing wound pain, absorbed well, was versatile for wet or dry wounds. All wounds responded positively to the dressing. Therefore, this small study demonstrated positive outcomes when ActiFormCool was used.

#### References:

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