

Softform[®] Premier Active 2 Mattress – Effective therapy solution for complex patients with severe pressure ulcers

Product Focus – Softform Premier Active 2

The original hybrid concept was created by Invacare in 2005, when the already proven Softform Premier static foam mattress was combined with a layer of cells placed beneath it to create the Softform Premier Active mattress system. This clever design provided a therapy solution combining the effectiveness of alternating therapy with the comfort of a high specification castellated foam interface.

A compact pump could be added to the underlying cell structure if the patient required 'stepping up' to alternating therapy.

This new therapy system paved the way for clinicians to question current practices and opened the gateway for industry to shift from the traditional static or dynamic support surfaces, to producing combination therapy solutions. The Softform Premier Active 2, renamed following upgrades to meet the rigorous demands of infection control, has since demonstrated its effectiveness in resolving the compromises of a traditional air mattress. Such compromises were highlighted as discomfort, motion sickness and patients sliding down the bed by Thompson (2006). Also noted were the successful outcomes for clinically compromised patients with Grades 1 and 2 Tissue Damage. The Softform Premier Active 2 mattress, which was initially launched as a solution to issues related to power failure in the community and as a therapy to treat superficial ulcers, has gone onto far outreach the expectations for which it was designed. It has now become a successful solution for the most compromised patients with the most severe pressure damage, including the healing of multiple pressure ulcers simultaneously.

In many cases the 'hybrid' theory was questioned for its intended capabilities, considering it to be less effective than the 'traditional' air mattress systems. Gray et al (2008) carried out a study to compare the Softform Premier Active mattress to a standard air mattress in two acute care of the elderly wards over a six month period.

The results indicated that the Softform Premier Active 'hybrid' mattress was as effective as a standard air mattress in preventing pressure ulceration in the high-risk patient population. The need for immediate intervention for treatment of a pressure ulcer is well documented, although in practice this can often be a timely process before intervention takes place. In some cases up to 7 hours (Fletcher, 2015).

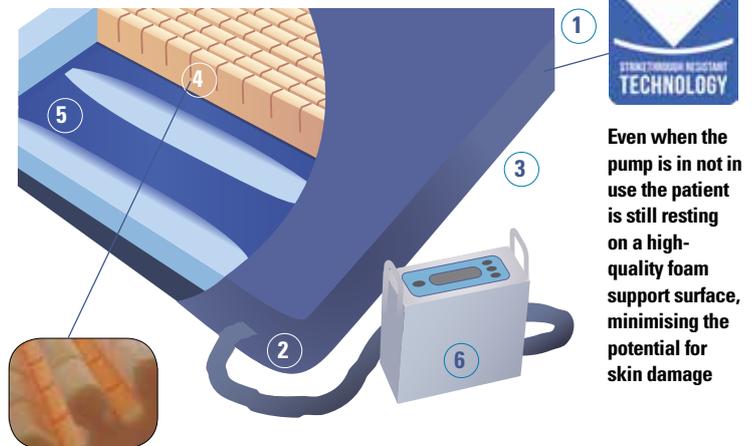
When the practice involves simply the attachment of a pump, rather than removing the current mattress to replace with an alternative system, the process of 'stepping up' or 'stepping down' is greatly improved, saving valuable nursing time, additional resources and omitting the need for patient disturbance. As the constraints of finances play a major part in equipment provision, it should come as little surprise that many hospital and community trusts have adopted the principle of providing a Softform Premier mattress on every bed, delivering a static surface with high specification foam interface and purchased a provision of pumps to attach if there is a requirement to 'step up' to a higher level of therapy. Medway NHS Foundation Trust were able to demonstrate projected cost savings in excess of £1.85 million over a seven year period by saving revenue for decontamination and rental expenditure by installing such a system throughout the Trust. (Adams, 2013)

As an additional cost saving benefit, the cover of the Softform Premier Active 2 mattress was improved to meet the rigorous demands of the 21st century healthcare environment. By replacing the existing fabric with Strikethrough Resistant Technology (SRT) fabric, mattress audit failure rates reduced from as high as 87% to less than 4%. Thus reducing the expenditure allocated to replacing component parts (Stevens, 2013)



Figure 1: Key features of the Softform Premier Active 2

- 1 **Strikethrough Resistant Technology™ cover** — designed to combat rigorous hospital cleaning procedures. Made from breathable, yet highly durable and highly chemical-resistant polyurethane polymer, which makes it more resistant to abrasion and damage
- 2 **Concealed zips and welded seams** — reduce the risk of fluid ingress for improved infection control
- 3 **Side wall support** for ease of handling and patient transfer
- 4 **Patient interface** — **castellated foam insert on top** — the size of each foam cell and the design of the key hole cuts allow the mattress to absorb shear and friction forces, and ensure the patient is immersed into the foam for optimal pressure redistribution
- 5 **Air cells** — placed underneath the foam layer for improved patient comfort. Channels concealed within the foam, supply air to the cells and are undetectable by the patient
- 6 **Digital pump** — plugs into a concealed pump hose. Incorporates simple on/off switch, LCD screen and intelligent software. Converts the static mattress to a dynamic mattress.



Even when the pump is in not in use the patient is still resting on a high-quality foam support surface, minimising the potential for skin damage

Fig 1. Softform Premier Active 2 system. A 'hybrid' mattress with a castellated foam patient interface
(Wounds UK May 2015 Making the Case)

As clinicians continue to challenge the capabilities of a system with a foam patient interface with underlying air cells, the Softform Premier Active 2 is able to demonstrate effective treatment of pressure ulcers for patients with the most complex issues. Jackie Stephen-Haynes (2010) carried out an audit of 20 patients to determine the clinical effectiveness of the mattress system. The audit indicated that despite significant age, chronic illness and palliative care needs, the Softform Premier Active 2 mattress was able to offer a number of clinical benefits including improved patient comfort, reduced spasm and improved sleep, as well as improving or maintaining patients' skin integrity.

There are often cases where clinicians are faced with the challenges of treating pressure ulcers for patients whose lifestyle and choices present conflict to prescribed treatments and outcomes are often affected as a result. The following case study outlines such a scenario and describes how, posed with the most challenging circumstances, the Softform Premier Active 2 can have a beneficial effect on skin integrity, patient lifestyle and clinical expectation.

Case Study

Tony is a 54 year old gentleman with Cervical Myeloradiculopathy, Osteomyelitis and Spastic Quadriplegia. He is ventilated via a tracheostomy, is peg fed, catheterised intermittently and is faecally incontinent. He spends much of his day in a non-powered wheelchair and travels extensively using various means of transport. As a previously independent professional, he has maintained his lifestyle and his social commitments as much as possible with the help and support of his family, who are his main carers.

In May 2013, a Grade 4 pressure ulcer had developed on Tony's sacrum which was both necrotic and malodorous, measured 6.5 x 6.5cms with a depth of 3cms. Despite appropriate advice, dressings and the prescription of an alternating air mattress, by the end of July, 2013 the wound had deteriorated to 13 x 10 x 6cms, was 80% granulating, 20% slough (Fig. 2). The constraints of Tony's condition and lifestyle choices were making treatment extremely challenging and coupled with Tony's faecal incontinence and the position of his pressure ulcer, a positive clinical outcome was inevitable likely to be slow.



Fig. 2 - Grade 4 Sacral pressure ulcer



Fig. 3 - Healing Grade 4 Sacral pressure ulcer



Fig. 4 - Grade 3 pressure ulcer, right elbow



Fig. 5 - Grade 3 pressure ulcer right heel

A Softform Premier Active 2 mattress system was provided for him in August following feedback from both Tony and his wife that suggested neither of them were sleeping well due to the noise level of his alternating dynamic mattress. Tony's initial comments when his mattress was replaced were encouraging, stating *'The effects of the mattress and its benefits were instantaneous. Sleep was brilliant because there was no noise from the mattress, I didn't feel movement from my initial position and I did not slip down the bed at all'*, another concern he had also raised about his previous mattress.

He went onto say *'there is no way this mattress is going to be taken away'*

Within 2 weeks, Tony's pressure ulcer had reduced in size to 9 x 10 x 6cms and was 100% granulating. By November, 2013, further improvement was noted with the size of the pressure ulcer was recorded as measuring 8 x 7cms, 90% granulating, 10% slough. The size of the ulcer was documented as measuring 7 x 7.5 100% granulating by mid-December. The challenges faced by clinicians continued, which included contamination of dressings and pressure being exerted onto the wound during the day as he continued to spend up to eight hours at a time in his wheelchair on a static cushion. Despite a severe wound infection, the pressure ulcer continued to go onto improve following antibiotic therapy (Fig 3). By April, 2014, the wound measured 5 x 5 x 3cms, 70% granulating, 30% slough. The positive effects of his mattress, coupled with appropriate dressings proved to be the major contributing factors for the management of Tony's pressure ulcer, given the location and testing circumstances for which clinicians were challenged. His wound is now 3 x 3cms and manageable and presents as a shallow ulcer.

Simultaneous to his sacral ulcer, Tony had also developed a Grade 3 pressure ulcer to his right elbow (Fig. 4), recorded as 4 x 2cms black eschar in July, 2013 prior to the Softform Premier Active 2 mattress being prescribed. Within five weeks, the wound had reduced in size to 2.5 x 0.5cms and was completely healed by February, 2014. Grade 3 pressure ulcers (Fig. 5) to both his heels were also healed within four weeks of the Softform Premier Active 2 being installed.

The Softform Premier Active 2 mattress system, with its high specification foam interface, was not only able to treat Tony's pressure ulcers in multiple locations it was also a welcome solution for his comfort needs, an indication that this is an ideal support surface for the most complex patients with the most severe pressure ulcers.

For more information or to see a sample speak to your local Business Development Manager.



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Invacare Ltd, Pencoed Technology Park, Pencoed,
Bridgend. CF35 5AQ
T: 01656 776 222 // F: 01656 776 220

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