

# NURSING

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# Cost-effective pressure ulcer prevention: the paradigm shift?

The key requirement of any healthcare delivery system is that services are delivered efficiently and effectively and that the total cost is kept under control.<sup>1</sup> Around 400,000 people develop a new pressure ulcer annually in the UK, costing the health service an estimated £1.8 - £2.6bn per annum<sup>2</sup>

The Repose static air pressure redistribution mattress overlay is an NHS invention (see Figure 1). It has a low unit cost and may be viewed as a valuable inclusion in the pressure ulcer equipment armoury. The Repose system has the added advantage of being lightweight and low profile, which means it does not significantly alter the height of the bed for ease of moving and handling. It can also be used on a double bed and allows the patient to sleep with their partner and hence normalise life as much as possible.

## Cost-effectiveness and positive clinical outcomes

The Repose mattress can provide a cost-effective alternative to high-tech motorised dynamic systems in the prevention of pressure ulcers. Research by MacFarlane and Sayer showed that "[...] the use of Repose mattress overlays resulted in dramatic reduction in cost, while the prevalence of pressure ulcers and hospital-acquired pressure ulcers dropped by 4-5%."<sup>3</sup>

In a randomised trial involving 50 patients Osterbrink concluded: "Repose provides a highly effective system that can be used [...] for both preventive and therapeutic purposes."<sup>4</sup>

Heels are another common area of ulceration. The Repose range includes heel protectors that provide pressure relief. These are of particular value in vulnerable older patients and those with compromised perfusion or lack of sensation, such as diabetic patients who are at increased risk of developing heel lesions. Bale et al noted that although further research was required the foot protector demonstrated positive outcomes in improving the condition of damaged skin over a period of time in vulnerable patients.<sup>5</sup> MacFarlane and Sayer subsequently confirmed this.<sup>3</sup>

## Improved quality of life

A system that is silent and unobtrusive provides major benefits to the patient's quality of life. A pilot study focusing on the sleep patterns of patients with chronic illness demonstrated that Repose significantly improved sleep patterns (mean time from 3.8 hours to 6.4 hours in four weeks) and self-reported pain.<sup>6</sup> The Repose foot

protector has also been shown to reduce discomfort in patients with painful conditions.<sup>5</sup>

## Seating

The Repose seat cushion provides a low-profile pressure-redistributing surface to complement the mattress when the patient is mobilising. The Repose cushion has the added advantage of maintaining the dimensions and height of the seat. Cushions of increased depth will alter the height of the chair, and may increase the risk of shearing force damage due to the patient sliding down the seat if the femur is not at right angles to the floor.

Research has shown that the Repose cushion was "significantly better than the other cushions at reducing the high pressure when slouching or sliding down."<sup>7</sup>

## Suitable for all healthcare settings

The Repose system can be used across all health and social care settings indeed. Continuity of care may be enhanced if the system is utilised throughout the patients' journey of care. Hampton demonstrated the cost-effectiveness of using Repose to facilitate discharge from hospital of patients at continued risk of pressure damage.<sup>8</sup> A recent examination of usage in one large loan store demonstrated that the average life of a Repose mattress within the community is 19 months.<sup>9</sup> This highlights the value of the system at the primary/secondary care interface.

## Conclusion

A NICE commissioned report by the National Collaborating Centre for Nursing and Supportive Care stated "where appropriate, consideration should be given to selecting lower-cost devices."<sup>10</sup> This was further reinforced by a Scottish Executive Discussion Document which stated: "we will become more dependent on efficiency savings and rigorous prioritisation".<sup>11</sup> Providing cost-effective solutions for the prevention and treatment of pressure ulcers is a challenge for health and social care professionals. The Repose range therefore represents an important addition to the pressure ulcer equipment armoury. The Repose range can improve quality of care and help in chronic disease pain management. ●

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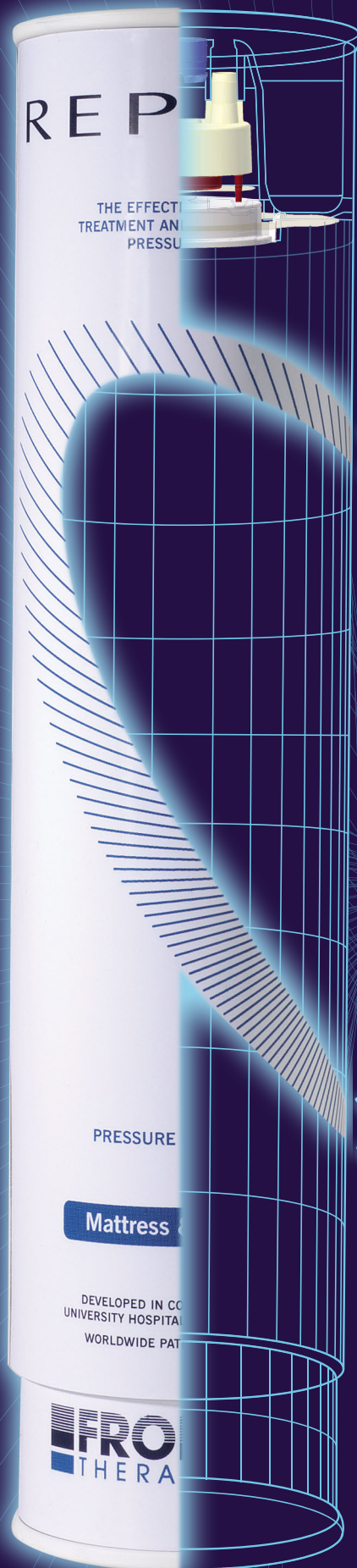
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Fig 1. Repose product set



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