Transfoam Wave: the new addition to the Transfoam range

Clare Williams

Abstract

There are many types of support surfaces available. Selection of a suitable support surface for an individual patient is best done by first identifying the patient's risk of pressure sore development. Transfoam was originally developed in 1990 and is designed for the medium-risk patient. The new design Transfoam Wave combines increased comfort with lower interface pressures, to provide another mattress in the Transfoam family. This product focus examines the original Transfoam mattress produced by Karomed and looks at the design and results of early testing of the new Transfoam Wave.

Clare Williams is Nursing Officer/Tissue Viability, Wrexham Maelor Hospital, North Wales

The true cost of pressure sores and the percentage of patients who develop pressure sores remain unknown (Fletcher, 1996a). What we do know is that, following identification of 'at risk' patients, a prevention strategy that includes the selection of a suitable support surface can be put into action.

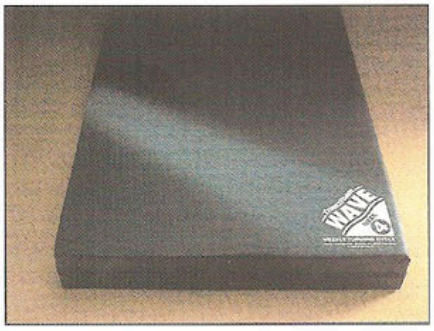

Figure 1. The Transfoam Wave.

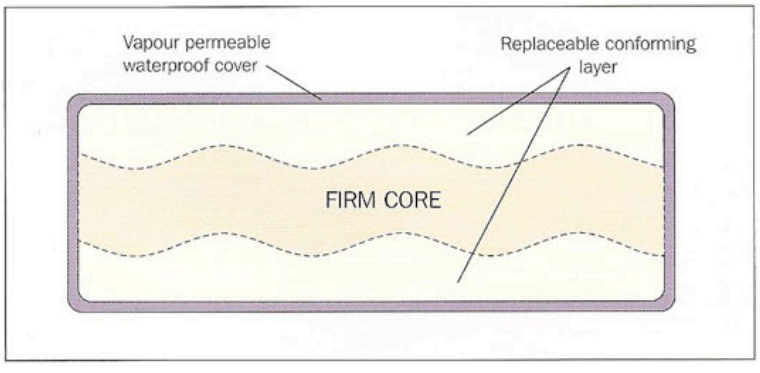

Figure 2. Diagrammatic representation of the foam cut within the Transfoam Wave.

Pressure sore formation is a complex process that cannot be attributed to any one single factor (Young, 1997), although it is universally accepted that the process begins with pressure. Other extrinsic factors that influence pressure sore development are friction and shear. In reality, these three forces rarely occur individually, but in combination (Fletcher, 1996a).

The provision of an adequate support surface that will meet the needs of each individual patient, depending on his/her risk of developing pressure sores, will help to overcome the problems of pressure, shear and friction.

The equipment available to help prevent pressure sore development is expanding rapidly; consequently, the healthcare professional can find it increasingly difficult to select the ideal support surface.

Pressure sore preventing equipment can be defined as either pressure-relieving or pressure-reducing equipment. Fletcher (1996b) describes pressure-relieving systems as:

> '...the dynamic systems which alternately apply and remove pressure by inflation and deflation of cells. Pressure-reducing equipment reduces pressure by redistribution over a greater surface area.'

Pressure sore preventing support surfaces can be further divided into three main categories:

- Alternating pressure
- Constant low pressure
- Turning devices (Fletcher, 1996b).

Support surfaces are most commonly evaluated by measurement of interface pressure (Fletcher, 1996c). Interface pressure is the amount of pressure generated between the patient's skin and the support surface. However, the optimum interface pressure, i.e. the level of pressure that prevents occlusion of the underlying blood supply, is still debated.

Reprinted from the British Journal of Nursing, 1997, Vol 6, No 20

TRANSFOAM MATTRESS

Transfoam was developed and launched in 1990. The Transfoam family consists of a replacement mattress, a trolley version, double bed version and a cushion.

Transfoam comprises a combination of foams, with a firm edge. The foam is enclosed in a multi-stretch, vapour-permeable waterproof cover. It is designed for pressure relief in the medium-risk patient.

The mattress has been evaluated by Rimmer (1992), the Medical Devices Agency (1993) and Fletcher and Billingham (1993) who all concluded that Transfoam appeared to be an effective and comfortable option for mattress replacement. In all three studies, Transfoam achieved some of the lowest interface pressures using pressure monitors and indentor tests.

Building on the original Transfoam mattress, a new model was launched this year called Transfoam Wave.

TRANSFOAM WAVE

The Transfoam Wave (*Figure 1*) was developed to produce a more comfortable version of the Transfoam mattress without recourse to the standard method of softening foam, i.e. slashing the top surface. Some patients, especially the elderly, had commented that the original Transfoam was firmer than they had anticipated.

Transfoam Wave incorporates a wave within the structure of the foam interior (*Figure 2*). The wave is formed from high density foam which conforms to the patient's shape, spreads the load and reduces interface pressures.

Karomed claims that as the patient's position changes, the interface pressures vary, not dissimilar to the way in which an alternating-pressure system operates.

The wave is not formed by cross-cutting the foam as cross-cutting or slashing (profiling) may adversely affect the foam's lifespan (Rithalia, 1996). Instead, the wave form is produced in a replaceable insert.

It is important that the methods used to soften a mattress do not adversely affect its lifespan. The lifespan of the mattress can be enhanced by adhering to the turning cycle and instructions for care, which are printed on the surface of the Transfoam Wave mattress. The cover is multi-stretch, vapour permeable and washable.

CONCLUSION

It is early days yet for Transfoam Wave, but initial testing has proved promising. A full randomised controlled trial is underway with initial results expected shortly. BJN

Fletcher J (1996a) The principles of pressure sore prevention. *Nurs Stand* **10**(39): 47–53

Fletcher J (1996b) Types of pressure-relieving equipment available: 1. *Br J Nurs* 5(11): 694–701

Fletcher J (1996c) Types of pressure-relieving equipment available: 2. *Br J Nurs* 5(13): 810–6

Fletcher J, Billingham G (1993) Mattress replacements: assessment and evaluation. *J Tissue Viabil* 3(4): 123–6

Medical Devices Agency (1993) *Evaluation of Foam Mattresses. No. PS1.* Department of Health, London

Rimmer C (1992) Establishing the cost of comfort: effectiveness of mattresses in pressure sore prevention. *Prof Nurse* 7(12): 810–5

Rithalia S (1996) Pressure sores: which foam mattress and why. J *Tissue Viabil* 6(4): 115

Young T (1997) Pressure sores: incidence, risk assessment and prevention. *Br J Nurs* 6(6): 319–22

KEY POINTS

- Selection of a suitable support surface begins with a comprehensive and holistic risk assessment.
- Products are commonly evaluated using interface pressures — the pressure generated between the patient's skin and the support system.
- The original Transfoam was developed in 1990, and is made up of a combination of different density foams.
- Transfoam Wave is made up of a firm core and a formed wave within the structure of the foam interior.
- Initial results show that interface pressures are reduced in key areas compared with another leading mattress.

"Transfoam Wave incorporates a wave within the structure of the foam interior...The wave is formed from high density foam which conforms to the patient's shape, spreads the load and reduces interface pressures."