

## PRODUCT FOCUS

# Cushions and specialist chairs for pressure sore management

Pam Cooper

### Abstract

*Many patients spend more time sitting out of bed than being cared for in bed. Consequently, the demand for specialist support surfaces for chairs to reduce the risk of pressure damage while the patient is up sitting is rising. This product focus examines a number of seating support surfaces produced by Karomed.*

Pressure sores are costly to both patients and carers, not only in terms of pain and suffering but also in monetary terms, although the exact costs remain unknown (Fletcher, 1996). With targets to meet, such as *The Health of the Nation's* annual 5% reduction in incidence of pressure sores (Department of Health, 1991) the focus is pressure sore prevention.

The aetiology of pressure sores is complex, although pressure, shear and friction are widely recognized as major contributing factors (Flanagan, 1993). Although many patients are given a suitable support surface to meet their individual needs while they are being cared for in bed, little consideration is given to their needs while they are up sitting. The reason for this is unclear, but it is an



**Figure 1.** An increasing number of patients are spending more time in a wheelchair than ever before.

Pam Cooper is Clinical Nurse Specialist in Tissue Viability at the Aberdeen Royal Hospitals NHS Trust

issue that needs to be addressed, as an increasing number of patients are spending more time in a chair than before (Defloor and Grypdonck, 1997; *Figure 1*). While the patient is up sitting, the pressure exerted on the contact surface is very high and the risk of pressure sore development increases significantly (Gebhardt, 1987; Gray, 1992; Gebhardt and Bliss, 1994); it is therefore essential to have the patient seated on an appropriate support surface (*Table 1*).

There is a plethora of equipment available to help prevent pressure sore development while the patient is up sitting, ranging from static systems, high density foams and gel pads to the relatively new technologies of alternating pressure air cushions (APACs). Choosing the right equipment can therefore prove difficult.

### FLOTAIR CUSHION

Karomed's Flotair cushion was designed to meet the needs of high to very high risk patients who are confined to wheelchairs for long periods. The cushion comes in 5 cm or 10 cm shaped cones made of neoprene rubber (*Figure 2*). The cushion, which is individually set, positions the patient by immersing him/her into the cushion, thereby protecting the patient against shear and friction (Sebag, 1994; *Figure 3*). In the management of patients with existing sores,

**Table 1.** The Karomed range of pressure-relieving cushions

Cushion	Risk status
Checkpad	At risk
Transoft	At risk
Transfoam	At risk to medium risk
Transflo	Medium to high risk
Flotair	High to very high risk
Transair	High to very high risk

## CUSHIONS AND SPECIALIST CHAIRS FOR PRESSURE SORE MANAGEMENT

Sebag concluded that the Flotair aided the healing process as well as providing high levels of comfort and reducing the patient's perception of pain.

### TRANSFLO CUSHION

The Transflo cushion was patented in the 1980s, with many variations to meet the needs of a wide user market. The Transflo consists of an outer, multistretch, vapour permeable cover which covers two gel sacs surrounded by a high density foam (Figure 4). When the patient sits on the cushion the gel evens out, contouring to the shape of the patient. This ensures that a larger surface area of the patient is in contact with the support surface, thus reducing the risk of the development of high pressures, which could lead to tissue damage. Dealey et al (undated) reported on the stabilizing benefits of the Transflo device.

The Transflo range includes standard, leisure, heavy duty, ellipse and made-to-measure. The Transflo heavy duty cushion is specifically designed for patients weighing in excess of 16 stones, or those who prefer a firmer support surface. Karomed also offers the made-to-measure service, which is ideal for patients with specific needs.

Karomed has just developed the Transflo barrier cushion. This incorporates the Transflo cushion which is encapsulated in a waterproof barrier, making the cushion easy to wash and to keep clinically clean. The Transflo barrier can be incorporated into all armchair styles manufactured by Karomed. The armchairs are designed to provide lumbar support, and have easy grip arms, which not only enable the patient to sit comfortably but also assist the patient when rising from the chair. The use of the Karomed Winchester chair has been reported to reduce the incidence of hospital-acquired pressure sores (Collins and Hampton, undated).

### TRANSAIR ALTERNATING CUSHION

The Transair alternating cushion (Figure 5) was designed to improve patient comfort levels as well as eliminate feelings of instability and insecurity while patients are up sitting. This was achieved through its unique foam/air technology design, which combines the known benefits of both foam and alternating air cells. The foam is located within the air cells, allowing the air to circulate around the foam.



Figure 2. The Flotair cushion was designed for high to very high risk patients who are confined to wheelchairs for long periods. The cushion comes in 5 cm or 10 cm shaped cones made of neoprene rubber.

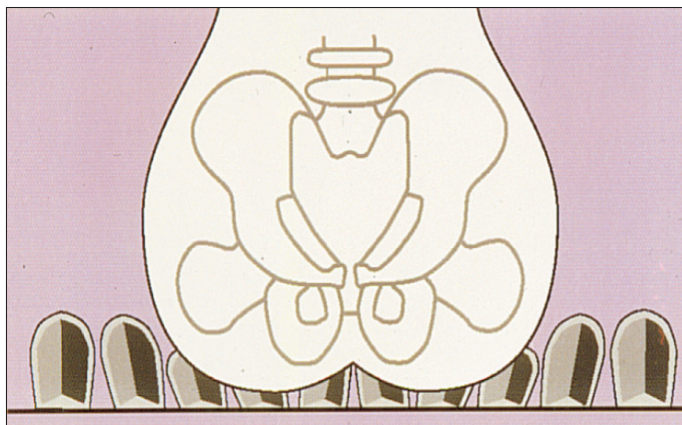


Figure 3. The Flotair cushion positions the patient by immersing him/her into the cushion, thereby protecting the patient from shear and friction.



Figure 4. The Transflo cushion consists of an outer, multistretch, vapour permeable cover which covers two gel sacs surrounded by a high density foam.

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Karomed suggests that the foam supports the user, thereby reducing the patient's feelings of instability associated with earlier systems.

The Transair cushion can be used independently with its own pump, or it can be run from the Transair 1000 and 2000 mattress pump units. The purchase of an adapter will allow both mattress and cushion to operate simultaneously.

In a multi-centre pilot study, the majority of patients considered at high risk of pressure sore development found the Transair comfortable or very comfortable and patients with existing sores showed improvement in their skin integrity (Gray et al, 1998).

### TRANSOFT AND TRANSFOAM

Transoft is a fibre-filled comfort cushion for at-risk patients. Unlike other fibre-filled cushions, it has a weld-sealed, vapour-permeable cover. This is of particular importance in the care of the incontinent patient.

The Transfoam mattress range has been widely used in hospitals since 1990, and is regarded as an effective pressure care mattress replacement option (Williams, 1997).

**Figure 5. The Transair alternating cushion's unique foam/air technology design combines the known benefits of both foam and alternating air cells.**



The Transfoam cushion is similarly constructed and is a natural adjunct to the range.

### CONCLUSION

The Karomed seating range is designed to meet the requirements of the majority of patients from low to very high risk (Table 1). Karomed also provides a made-to-measure service, as well as a range of armchairs with built-in pressure relief. The seating range encompasses all technologies from fibre-filled, high-density foam, gel/foam, air flotation, and also alternating-pressure cushions aiming to meet the needs of all patients. [BN](#)

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### KEY POINTS

- A comprehensive selection of cushions to meet the needs of the individual is available.
- The Flotair cushion has been shown to aid the healing process as well as providing comfort and reducing the patient's perception of pain.
- The Transflo range includes standard, leisure, heavy duty and ellipse.
- The Transflo barrier cushion can be integrated into all armchairs manufactured by Karomed.
- Karomed also offers a made-to-measure Transflo cushion which is ideal for patients with special needs.