**Static Pressure Reducing Overlays and Heel Elevators**

All the products are made of thermoplastic polyurethane (TPU) and, because they are designed to be re-used rather than single use, have an antibacterial additive which cannot be washed away and lasts the life of the product. The additive is effective against a range of organisms including K. pneumoniae, E.coli, P.aeruginosa, MRSA, S.choleraesuis, E.faecalis, B.subtilis, C.difficile, C.albicans and A.niger.

The products may be cleaned with soap and water between use and alcohol based products to decontaminate them. Static systems fall into the category of pressure reducing products as they work by spreading the patient’s weight over a greater surface area and so reduce the contact pressures over vulnerable areas of the body.

**Results**

The evaluations were graded on seven key areas: 1. ease of installation, 2. ease of cleaning, 3. ease of transfer, 4. acceptability by the patient, 5. preference of not having control units and power leads, 6. achieved the effect of preventing new tissue damage and 7. would the carer use it again. There was a 100% acceptance of these key areas.

**Cost Comparisons**

For the bed with dynamic

The WAFFLE overlay which was compared to the Sidhil Trio dynamic mattress replacement system gives a saving of £72 with the benefit of not having to move/store a foam mattress or use a pump and power-point.

For the bed with standard foam mattress

As well as using the dynamic mattress our unit also use a high specification standard foam mattress for patients at a lower risk of pressure ulcers. The study found that even a patient on this type of support surface can become high risk (1). The mapp system was placed on a standard foam mattress and the patient monitored at a horizontal position, the outcome of the mapp visual was satisfactory and of low risk. The patient was then raised to 30 degrees head up position and the live image from the mapp system outlined that the patient was of high risk of breakdown around the sacrum area, a waffle static overlay was then placed under the patient and inflated with the static air pump, showing in a short time the combination of the foam mattress working in collaboration with the waffle overlay produced outstanding results in off-loading the patient in this area.

For the chair

We have a range of cushions available but on average, WAFFLE seat cushion is 40% less expensive and does not elevate the patient too high, only 3-4 cm in depth.

For the heels

WAFFLE heel elevators are 7% less expensive than the ones we use and also have the benefit of not requiring bandaging or tubular bandages to keep in place unlike other products which are an L-shaped and most importantly the heel elevator waffle boot correctly off-loaded the heel.

**Conclusions**

We accept this is a very small study and only reviewed four patient episodes because they tend to be with us for a while, we are encouraged that static pressure reducing products are performing as well as dynamic alternatives. Our carers did not change, we continued patient repositioning as we would have normally done without the need of high risk areas. We accept this is a very small study and only reviewed four patient episodes but do feel that our results are encouraging and promising for the future.

**Intervention with Equipment**

High specification foam mattress are now widely used in the NHS and at our unit and they cost between £120-£200 each (2). We also use a variety of alternating pressure devices and mattress replacements which can cost up to £2,640 per item. The widespread use of pressure reducing equipment is commonplace within the NHS and our unit currently uses the Sidhil Trio dynamic mattress replacement system.

**Case Number 1**

Female, 76 yrs, risk level: medium, existing pressure ulcers: grade 1, both heels. Presenting condition: periprosthetic fracture to the right femur with rheumatoid arthritis, diverticulitis and back pain. Product evaluated: WAFFLE Mattress Overlay. Outcome: during the evaluation, the patient continued to be repositioned two hourly and found the product to be comfortable. No new tissue damage occurred during the evaluation.

**Case Number 2**

Female, 68 years, risk level: high. Presenting condition: COPD and chronic back pain. Product evaluated: WAFFLE Mattress Overlay. Outcome: patient was repositioned two hourly and no tissue breakdown occurred.

**Case Number 3**

Female, 87 yrs, risk level: low. Presenting condition: falls and fractures. Product evaluated: WAFFLE Seat Cushion. Outcome: no tissue breakdown and the patient preferred the cushion as it was not as high as ones previously used and she could reposition herself with it.

**Case Number 4**

Male, 71 yrs, risk level: high. Presenting condition: Parkinson’s disease, low mobility and fragile skin. Product evaluated: WAFFLE Heel Elevators. Outcome: no tissue breakdown and the patient found the product comfortable, light weight and had the additional benefit of holding the leg in place with the static air filled stays.

**Introduction**

Pressure ulcers occur when blood supply is decreased to tissues at bony prominences. Most pressure ulcers can be avoided by repositioning the patient at regular intervals and by the use of pressure relieving products. Treating a single pressure ulcer can cost between £43 and £374 per day and may increase hospital stay by 5-8 days per ulcer (1). Costs may increase due to an ageing population with long-term conditions who are considered to be at high risk (2).

**Aim of the Evaluation**

The aim of the evaluation were to consider and assess the effectiveness of a range of static pressure reducing products which were considerably less expensive than the products currently used. The products in the ‘Waffle’ range manufactured by EHOB were selected as they had many years of use internationally and had been used for patients at all levels of risk and all grades of existing tissue damage. The evaluations were arranged by the lead in Thornbury Hospital, South Gloucestershire.

**Evaluation of Three Static Air Support Surfaces and Mapping System in a Rehabilitation Unit at Thornbury Hospital**

Debbie Williams, RGN, Ward Sister & Rebecca Thomas, RGN, Ward Manager

Thornbury Hospital is a community hospital based in South Gloucestershire and is a part of Sirona Care and Health. The hospital consists of both an inpatient ward and an outpatients department. Our unit, Henderson ward, is a nurse led unit which has 20 beds. We are able to take patients with a wide range of health problems. Our patient group can be either admitted to us from the community via GP’s, Community Matron, ICT or ECP’s or transferred to us from any other hospital for further rehabilitation prior to being discharged home or into a community placement. We also accommodate people for palliative care.

**Case Number 1**

Female, 87 yrs, risk level: low. Presenting condition: Parkinson’s disease, low mobility and fragile skin.

**Case Number 2**

Male, 71 years, risk level: high. Presenting condition: Parkinson’s disease, low mobility and fragile skin.

**Case Number 3**

Female, 76 yrs, risk level: medium, existing pressure ulcers: grade 1, both heels.

**Case Number 4**

Male, 71 yrs, risk level: high. Presenting condition: Parkinson’s disease, low mobility and fragile skin.

**Static Pressure Reducing Overlays and Heel Elevators**

The evaluations were arranged by the lead in Thornbury Hospital, South Gloucestershire. The products in the ‘Waffle’ range manufactured by EHOB were selected as they had many years of use internationally and had been used for patients at all levels of risk and all grades of existing tissue damage. The evaluations were arranged by the lead in Thornbury Hospital, South Gloucestershire.