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Shared experiences of two Scottish Hospitals in the evaluation and resultant implementation of *Repose* mattresses and heel protectors as part of their hospital protocol in the prevention and treatment of pressure ulcers.

Introduction:

Pressure ulcer prevention is expensive and at times difficult to achieve (Hampton, 2000). Expense is incurred in the high cost of dynamic mattress replacement systems. In an effort to reduce their rental costs the Western General Hospital (WGH) Edinburgh, Lothian University Hospitals NHS Trust, decided to evaluate the use of *Repose*, an inflatable pressure re-distributing mattress overlay.

The development of hospital-acquired pressure ulcers on the heel is a well-acknowledged problem (Donnelly, 2001). In Hairmyres Hospital (HH) East Kilbride, Lanarkshire Acute Hospital Trust, there was concern over the raised incidence of heel ulcers in an orthopaedic ward therefore an evaluation of *Repose* heel protectors was undertaken.

Methodology: (Western General Hospital, Edinburgh)

136 *Repose* mattresses were introduced to various specialities throughout a 460-bedded acute hospital. A 6 month costing comparison of dynamic mattress replacement systems versus *Repose* mattress usage was made pre and post purchase. *Repose mattress* life expectancy was monitored over an 18-month period. Patient and staff comments were collected regarding product satisfaction. Prevalence of pressure ulcers was compared pre and post purchase.

Methodology: (Hairmyres Hospital, East Kilbride)

The study took place in a 24-bedded orthopaedic ward. Those included in the study were all patients who were admitted to ward who would be on bed rest for 24 hours or more and all patients who had existing pressure damage over heel. The *Repose* heel protectors were fitted to these patients on admission to the ward. The skin was checked daily for any signs of pressure ulcer damage. If the patient required removal from the study for any reason this was documented on the data form. Otherwise the heel protectors were worn at all times, while on bed rest, or until discharge from the ward.

Results: Western General Hospital, Edinburgh

The difference in the use of dynamic mattress replacement systems and *Repose* mattresses over a period of 6 months demonstrated as saving of £34,603. Eighteen months after purchase 74% of *Repose* mattresses remain in use, with an average monthly use of 2,431 bed days per month. (Warranty period for *Repose* is 6 months). Pressure ulcer prevalence audit results pre purchase of *Repose mattresses* was 11% (July 2000, in house audit) compared to post purchase results of 4% (February and September 2002, External audit).

Results: Hairmyres Hospital, East Kilbride

Over the three month period 44 patients were included in the trial, with no patient developing a heel ulcer. The initial trial period was for 3 months with the incidence falling from 17% to 0%. Over a 12-month period the incidence was 1% this included the 3-month trial period. Only three patients had pressure ulcers and due to their short stay in ward healing rates were difficult to determine.

Conclusions:

In WGH, *Repose* mattresses have demonstrated dramatic reduction in costs whilst the prevalence and hospital acquired pressure ulcers have not significantly altered. In HH, *Repose heel protectors* have clearly indicated benefits with a significant reduction in Incidence results. Satisfaction surveys carried out during the trial periods indicated that these products required low maintenance and were easy to use making them popular with nursing staff, patient and procurement staff. These two products are now part of the Guidelines for Pressure Ulcer Prevention and Management in both hospitals.

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