UTILISING INNOVATION TO REDUCE HOSPITAL ACQUIRED PRESSURE ULCERS AND RENTAL PRODUCT COST

South Tees Hospitals NHS
NHS Foundation Trust

Alison McGrath, Tissue Viability Specialist Nurse, Alison.Mcgrath@stees.nhs.uk

Introduction

Historically, and in line with NICE Guidance, South Tees NHS Foundation Trust used static mattresses as a standard support surface and rented a mixture of different pressure care surfaces when a patient's risk assessment indicated the requirement. The costs associated with the rental products were substantial, circa £600k pa, and the Pressure Ulcer (PU) incidence data was fluctuating.

With a CQUIN target related to PU incidence (the Trust target was a 20% reduction of hospital acquired category 2 pressure ulcers), the Trust had an agenda to reduce both Hospital Acquired Pressure Ulcers (HAPU) and the financial costs associated with the rental of dynamic mattresses. The Trust set itself an internal target of a 50% reduction in Category 3 and 4 PUs within 3 years, finishing 2016/17.

The Trust explored a more innovative solution, a powered hybrid surface, in an effort to achieve these goals. Having researched available clinical evidence and examined reference NHS sites that had adopted the solution, it was proposed that a powered hybrid would simplify choice with one surface able to be used in either static or dynamic mode. This would in turn:

- Reduce the reliance on, and related costs of, rented dynamic products.
- Enable earlier intervention, with patients able to be stepped up a dynamic surface without any delay.

An equipment provision review also highlighted that wards were over-prescribing dynamic mattresses and therefore education was required to help with this.

Methods

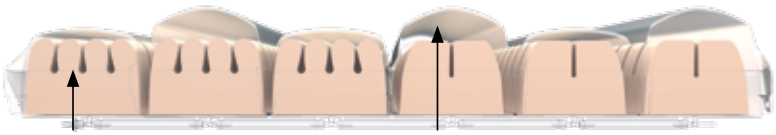
The Trust completed a Tender exercise. A key specification in the evaluation process was that the powered hybrid should be able to provide a) pressure redistribution in static mode and b) pressure relief in dynamic mode.

Powered Hybrid Mattress Key Specification

The selected Powered Hybrid Mattress benefits from the following features:

- Pressure Redistribution in Static Mode
- Intermittent offloading of pressure (Pressure Relief) in Powered Mode
- Clinical Evidence of effective treatment up to **Category IV** PUs

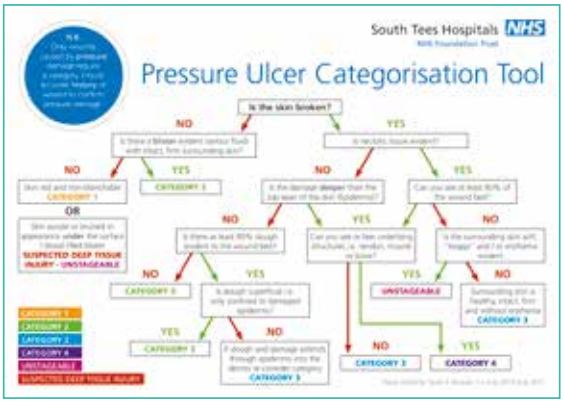
The powered hybrid mattress is constructed with foam filled air cells, functions as an alternating pressure system, providing pressure relief in the powered mode.



Where the foam is encased within the air cell the mattress is able to provide alternating pressure relief in the powered mode.

Fletcher J, Gefen A, Jones L, Sanada H, Irvine M, (2015) Hybrid Support Surfaces Made Easy', Wounds International

This process resulted in a shortlist of two powered hybrid products that were trialled for 4 weeks each. The trial demonstrated that the earlier intervention enabled by the hybrid system made a significant difference in PU incidence, and the preferred powered hybrid product was selected for implementation. The 10 wards chosen for the first phase of implementation included the acute admission wards, specialist medicine, care of the elderly and acute orthopaedics. These wards were chosen as their patients had the highest risk of developing pressure damage and subsequently they were the highest users in renting dynamic systems. A Trust wide audit also highlighted the need to improve patient compliance via information leaflets to raise awareness, and the requirement for a PU Categorisation tool to help nurses correctly categorise PU damage. Both the patient information and PU Categorisation tool[1] were implemented.



Results

Comparing data April – Dec 2014 vs same period 2015:

PU Reduction

- 51% overall reduction in PU incidence.
- 17% reduction in Category 2 Pressure ulcers (866 vs 716).

Cost Savings

- £26K initial monthly cost saving on Pressure care equipment.
- £212K annualised cost savings of on dynamic rentals (including cost of purchasing hybrids).

CQUIN Target Achieved

In April 2016 the Trust achieved its 2015/16 CQUIN target of 20% reduction of Category 2 Pressure ulcers.

Also 41% reduction in Category 3 and Category 4 PUs by year 2 of the 3-year target.

Discussion

The reduction in HAPUs achieved by implementing a powered hybrid mattress as the standard support surface has supported progress towards the Trust's CQUIN Target. By providing wards with the capability to immediately convert every surface onto a dynamic surface we reduce the harm caused by delays getting patients onto the appropriate support surface. These wards have no reason to rent dynamic mattresses any more, providing essential savings as the Trust aims to meet its financial targets.

Clinical Significance

The implementation of hybrid mattress solutions can help significantly reduce HAPUs, helping with the delivery of harm free patient care along with significant cost savings.

Intelligent® Pressure Care Management | Making a Measurable Difference

Reference:

1. IT'S YOUR SKIN: Patient information. Version 1, Issue Date: July 2015 – July 2017, Tissue viability team, South Tees Hospitals NHS Trust Pressure Ulcer Categorisation Tool, Version 1,July 2015-July 2017. Tissue viability team, The James Cook University Hospital