

IMPROVING OUTCOMES AND REDUCING COSTS IMPLEMENTING HYBRID MATTRESSES IN AN ACUTE TRUST

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Introduction

South Tees NHS Trust is an integrated Trust with a 1025 bedded acute hospital. As with most organisations reduction in PU is a key target; specifically to achieve an overall reduction in avoidable harm by 50% over 3 years.

In May 2014 the Trust became part of the South Tees Pressure Ulcer Prevention Collaborative.

This multi-professional and multi-agency steering group (including Commissioners) meets on a monthly basis.

The collaborative formulated a work plan to achieve the quality target.

Method

Following a thematic analysis of category 3 and 4 pressure ulcers, which had been reported as serious incidents, it was identified that early interventional measures such as the upgrading of mattresses to a dynamic system were identified in 4 of the 12 investigations. Therefore a high priority action on the work plan was to complete the planned roll out of a hybrid mattresses, the Dyna-Form® Mercury Advance (Direct Healthcare Services), for the top 10 high rental, high risk wards in the Trust. Used in conjunction with regular and systematic repositioning this early intervention was considered to be a key enabler to secure significant reductions in pressure ulcers.

The Proposed Benefits of Hybrid Mattresses – Embracing New Technology

An investment in the purchase of hybrid mattresses Dyna-Form® Mercury Advance (Direct Healthcare Services) was proposed with efficiency savings being realised through a 'one-system' approach enabling a Step-Up/Step-Down approach to care when clinically required.

These suggested efficiencies included:

- Reduced rental spend on dynamic systems (there are patients who will continue to require highly specialist systems and this has been taken into account during analysis and financial modelling)
- Reduced decontamination costs associated with Step-up/Step-down/less mattress changes
- Removes process costs associated with resource and logistics required for traditional Step-Up/Step-Down protocols
- Reduces the costs to the health economy as a whole of treating avoidable pressure ulcers
- Releases nursing time to care



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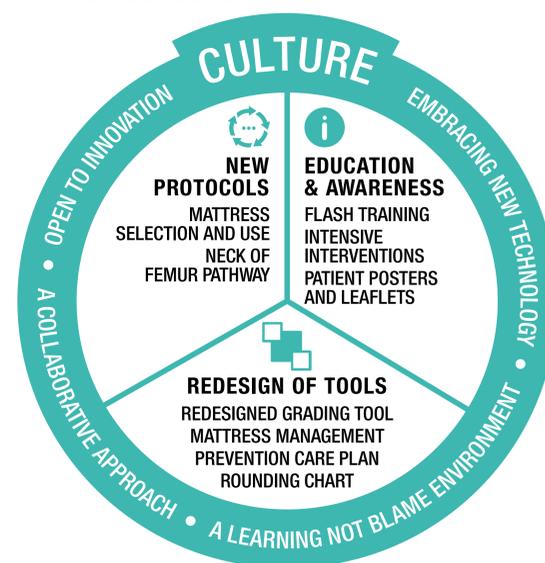
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Culture – Promoting a Learning Culture for Successful Implementation

South Tees promotes a learning rather than blame culture and education and awareness for both staff and patients is a key component of delivering higher quality care and preventing patient harm. In addition, there was a huge focus on redesigning tools and reviewing and streamlining protocols of care – see Figure 1.

Redesigned Tools
Rounding Chart and Pressure Ulcer Categorisation Tool

KEY COMPONENTS OF SUCCESSFUL IMPLEMENTATION



New Protocols
Mattress selection and neck of femur pathway

Feedback from the Initial Wards

Phase one of the hybrid implementation focussed on wards with high PU Incidence and high use of rented dynamic mattresses:

- Fracture Neck of Femur Ward
- Care of the elderly (3 wards)
- Specialist Diabetes Ward
- Stroke Unit
- Colorectal and Gastric Surgery Ward

This was swiftly followed by implementation of the hybrids across the rest of the hospital.

Fractured Neck of Femur Ward:

- As part of the fracture neck of femur pathway all patients were nursed on an alternating mattress from admission until the day of discharge. Since the introduction of the hybrid mattresses they have not rented an alternating mattress and their pressure ulcer incidence has reduced

Stroke Unit:

- Physiotherapists prefer the hybrid as they find it easier to transfer the patient

Colorectal and Gastric surgery ward:

- Patients find the mattress more comfortable

 **COST SAVINGS OF £46,000 OVER 1 YEAR WERE MADE ON THE NECK OF FEMUR WARD**

Discussion

The impact of the many other interventions put in place by the collaborative contributed significantly to the improvements made, however it seems that implementing the powered hybrid mattresses resulted in a step change in care delivery, focussing as much on the process of care delivery as the individual components.

Conclusion

Whilst it is acknowledged that the provision of specialist equipment forms only one part of pressure ulcer prevention, it is suggested that the equipment implementation has played a significant role in driving down the number and severity of pressure ulcers.