# A CLINICAL & FINANCIAL INVESTIGATION INTO THE USE OF HYBRID PRESSURE RELIEVING EQUIPMENT

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### Introduction

Hounslow & Richmond Community Health NHS Trust have over the last 12 months standardised their TCES catalogue to include Direct Healthcare Services Dyna-Form Mercury Advance Hybrid Mattress for use by the District Nursing teams in addition to procuring the hybrid systems for the Inpatient facilities at Teddington Memorial Hospital (TMH). This study aims to look at the clinical and financial benefits of taking a Hybrid Mattress approach to Pressure Care.

## Background (Local Trust Improvements)

HRCH have been looking at equipment provided and reviewing staff and patient feedback. The benefits of a hybrid mattress in the community have been recognised as reducing the need to swap the mattress due to deterioration or increased risk. Equally, the mattress can be stepped down to enable transfers and aid rehabilitation.

The use and benefits of this mattress have been recognised across the London Community Boroughs and is available to order on the London Consortium Medequip catalogue.

The Dyna-Form Mercury Advance has been used within some parts of HRCH for over 18 months. However, with formalised structure to equipment selection through a new framework for selection and enhanced clinical evidence affirming the efficacy of the product, the usage of the product has increased amongst the District Nursing teams. Below is a sample of patient outcomes who were nursed on the Hybrid system:

#### Clinical Outcomes

Present Condition upon Prescription of Dyna-Form Mercury Advance Mattress					Changes in Wound Condition				
Patient	Age	Grade of PU	Size of PU at Mattress Implementation	Wound Bed Consistency	Other Contributing Factors	Week 1	Week 4	Week 12	Other Comments
Male	62	3	Sacral PU. 5cm long, 3cm wide, 3cm central depth.	95% slough. 5% necrosis.	Multiple sclerosis, no upper or lower limb function.	50% slough. 50% granulating tissue.	95% granulation. 5% slough. Wound measurement of 2cm by 2cm.	Wound healed.	Patient reported improved comfort & transfers.
Female	79	3	Spine PU. 3cm long, 2.5cm wide, Depth immeasurable.	100% slough. Surrounding blanching erythema.	Kyphotic spine. Reduced mobility.	80% slough. 10% granulation. Reduction in blanching erythema.	30% slough. 20% granulation. 10% border epithelisation. Nil blanching erythema.	100% granulation. 1cm long, 1.5cm wide, 0.5cm depth. Nil blanching erythema.	Patient reported improved comfort.
Male	82	1	Sacral PU. 5cm long, 10cm wide, depth unknown.	100% non blanching erythema.	Inpatient, pyrexia, post fall reduced mobility. Unstable sit to stand ability.	2cm long, 4cm wide.	Healed. 100% blanching erythema.	Healed. Rehabilitation assisted with step up step down mechanisms enabling sit to stand position.	Patient reported increased confidence in sitting to standing due to stable base and foam bed edge.





# Hounslow and Richmond WES Community Healthcare "The mattress is very comfortable and very quiet" **NHS Trust**

In addition to the many clinical benefits, the use of the Hybrid Mattress has also proved more cost effective by reducing initial purchase price by up to 40-70% of other traditionally used full dynamic mattress replacements used by community nurses.

**Financial Benefits** 

HRCH values place focus on productivity and innovation. Through improved processes using the hybrid mattresses the district nursing/tissue viability teams were able to act faster upon changes in conditions or patient deterioration and make the appropriate interventions much earlier through the step-up/step down facility. If this can be attributed to reducing hospital admission/re-admissions through PU reduction then the financial implications are significant

"This mattress is great for our palliative patients at home" District Nurse "I feel safer getting in and out of bed" "'This has greatly helped rehabilitate our inpatients" – Matron, TMH to the local clinical commissioning groups. Further research is required here.

Due to the benefits outlined above and recommendations by the Tissue Viability service, HRCH procurement have now worked together with Direct Healthcare Services to implement the Hybrid Mattresses on Teddington Memorial Hospital Inpatient wards. An evaluation of the product was carried out on the ward with very positive feedback from healthcare professionals and patients.

Teddington Memorial Hospital will now benefit from the provision of 100% Dynamic Mattress capability and in turn generate a 5-year annualised cost saving of £123,459 (inclusive of all future servicing/maintenance costs) against the historic approach of renting dynamic systems.

Other clinical benefits reported across HRCH include improved mobility, enhanced comfort and sleep, easier repositioning and enhanced ability to transfer.

#### Conclusion

In summary by standardising the Hybrid Mattress into the equipment catalogue for HRCH it has provided a step up-step down facility — in turn providing an earlier intervention against pressure ulcer development and contributing to a reduction in pressure ulcer incidence. Additionally, this allows more valuable nursing time to be spent on caring for patients rather than associated administration and moving & handling of patients.

The integration of Hybrid Mattresses have proved successful within HRCH in the prevention and treatment of all Pressure Ulcer categories.