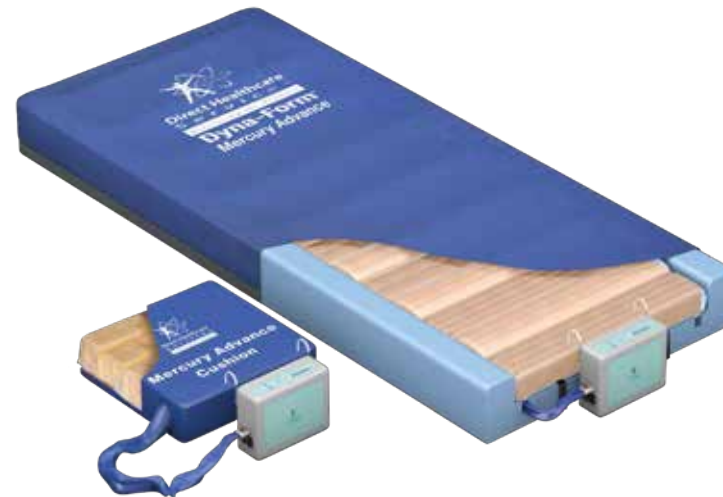


A CLINICAL & FINANCIAL INVESTIGATION INTO THE USE OF HYBRID PRESSURE RELIEVING EQUIPMENT

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Introduction

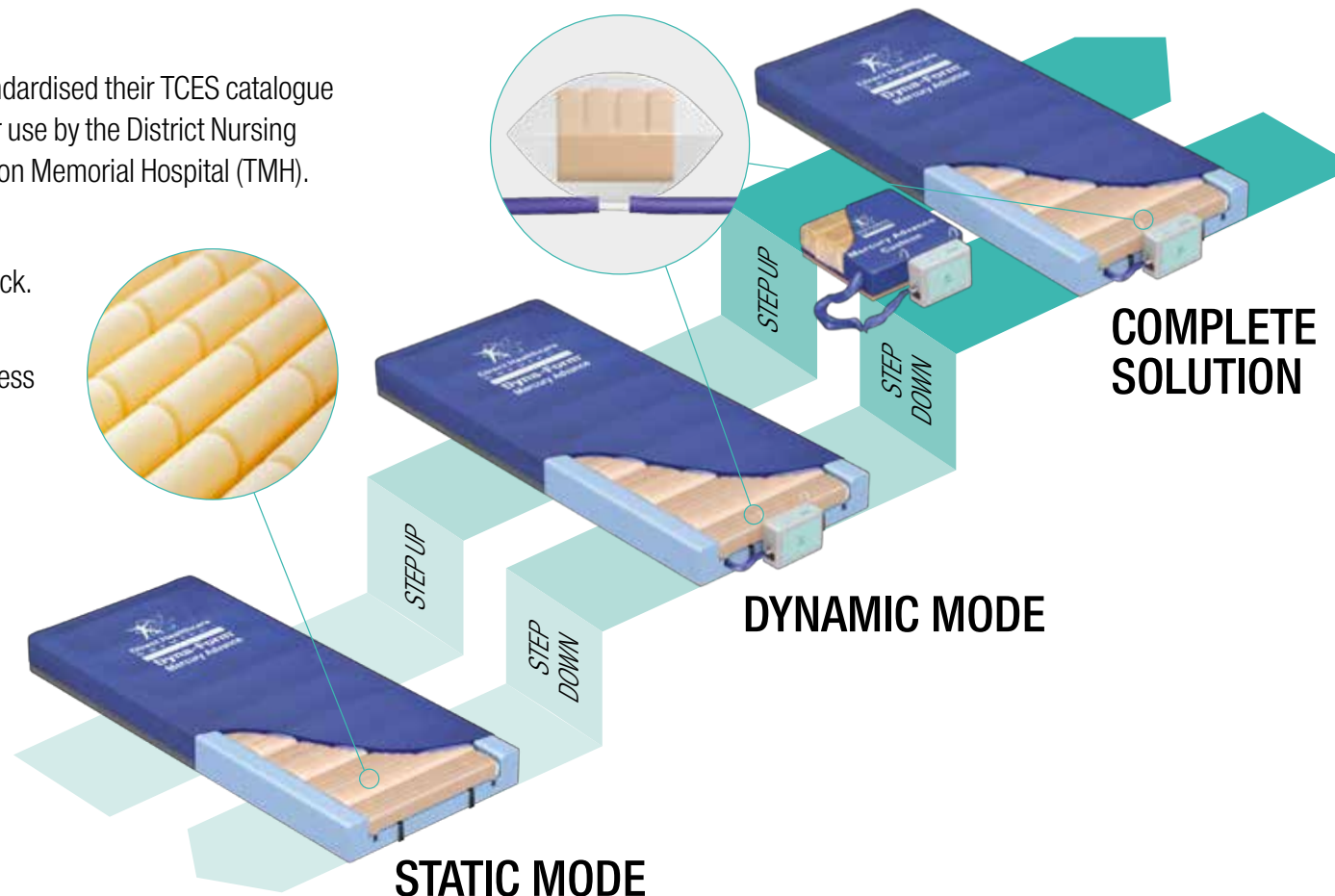
Hounslow & Richmond Community Health NHS Trust have over the last 12 months standardised their TCES catalogue to include Direct Healthcare Services Dyna-Form Mercury Advance Hybrid Mattress for use by the District Nursing teams in addition to procuring the hybrid systems for the Inpatient facilities at Teddington Memorial Hospital (TMH).

Background

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.



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The Dyna-Form Mercury Advance has been used within some parts of HRCH for over 18 months. However, with formalised structure to the 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. Following is a sample of patient outcomes when 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.

Positive Clinical Outcomes • Supporting Wound Healing • Increased Patient Comfort & Confidence

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Other clinical benefits reported across HRCH include improved mobility, enhanced comfort and sleep, easier repositioning and enhanced ability to transfer, corresponding with previous studies of the Dyna-Form Mercury Advance (Mason, 2013. Jones, 2013. Fumarola, 2013. Rafter, 2011).

The main benefit for the end user is that when used with our palliative patients this system allows for a much earlier intervention and the patient can remain in bed whilst the system is stepped up to a dynamic mattress. Additionally the system also allows stepping the patient back down to a static mattress when comfort is paramount at end of life, thus improving end of life experience for patients and family members.



Category I PU



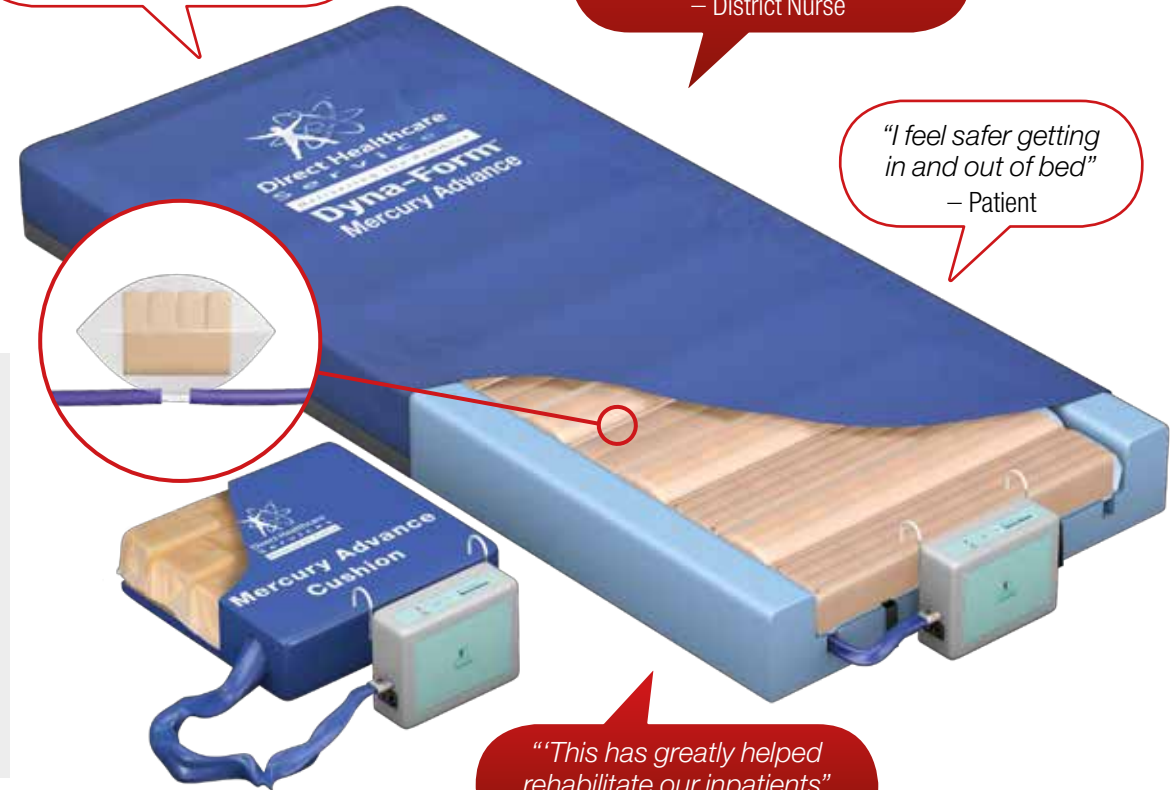
After treatment with alternating Hybrid mattress

An elderly gentleman was admitted into TMH after a fall, and having lain on the floor had developed a Category I Pressure Ulcer. The patient was immediately put onto an alternating Hybrid mattress and within 12 hours the affected area was almost completely re-perfused. The patient was then able to have the step-down option as he could turn independently and begin rehabilitation quickly, meaning the duration of his hospital stay was dramatically reduced.

"The mattress is very comfortable and very quiet"
– Patient

"This mattress is great for our palliative patients at home"
– District Nurse

"I feel safer getting in and out of bed"
– Patient



"This has greatly helped rehabilitate our inpatients"
– Matron, TMH

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Financial Benefits

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 the community nurses.

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 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.

SUBSTANTIALLY MORE COST-EFFECTIVE
STREAMLINED PROCESSES, MORE RESPONSIVE CARE
POTENTIAL REDUCED PU ADMISSIONS FROM COMMUNITY
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.

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Conclusion

- The integration of hybrid mattresses has proved clinically and cost-effective
- Simpler equipment selection by standardising the hybrid mattress into the equipment catalogue
- Step Up / Step Down feature beneficial, particularly for palliative patients
- Earlier intervention in PU development
- Reduced PU incidence
- More patient care, less moving & handling and administration

