

# Managing Pressure Areas in Vulnerable Adults with a New Hybrid Mattress.

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## Introduction

Vulnerable and elderly patients are at higher risk of pressure damage<sup>1</sup> than the general population. These patients are at increased risk of falls, confusion and anxiety. The combination of these factors can make pressure area care a challenge.

Within the EPUAP Guidelines<sup>2</sup>, additional guidance is given for the management of older adults and palliative care patients, including, considering the cognitive state of the patient, giving particular attention to vulnerable aged skin and the repositioning regime for those who are unable to reposition independently.

In addition, the National Safety Thermometer<sup>3</sup> records patient harms including the development of pressure ulcers and falls which occur in hospital Trusts.

It is therefore imperative that patients nursed in hospital are placed on the appropriate bed and mattress.

Holcot ward, Northampton General Hospital (Fig. 1) is an acute medical ward for frail, elderly patients, often with advanced dementia or at end of life. These patients typify the group identified above and typically have extended stays.

On the ward, low beds (Fig. 2) are frequently used due to the patients reduced physical and cognitive function in combination with a high specification foam mattress.

Early summer 2017, the Tissue Viability Pressure Ulcer incidence data started to show an increase. An investigation by the Senior Ward Sister and the Tissue Viability Nurse into the causes was carried out with an action plan agreed to address, including:

1. Skin checks on every patient by qualified staff at the start of each shift using the Trust skin assessment tool.
2. The evaluation of a new pressure redistribution mattress (Ultracore Plus) over a four to six-week period within a four-bedded bay.

## Method

Ultracore Plus (Fig. 3) is a static, hybrid mattress consisting of a foam U-core and a Repose inflatable inner. It uses proven immersion and envelopment technology for patients at risk of, and up to grade 2 pressure damage. The mattresses are suitable for use on high low beds as well as standard, profiling beds and has no electrical pump - reducing patient disturbance from associated noise. For these reasons, it was felt that it could meet patients pressure redistribution needs whilst on a bed suitable to address their falls risk.



Figure 1. Northampton General Hospital

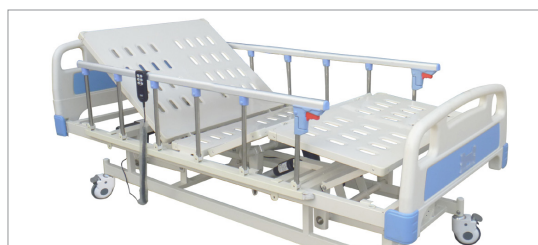


Figure 2. High Low Bed

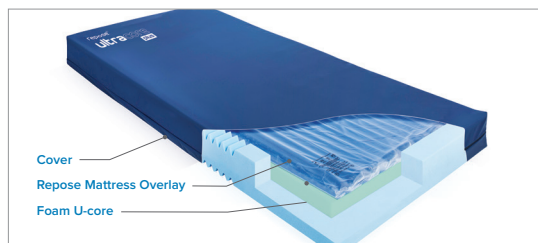


Figure 3. Ultracore Plus

Patients admitted to the evaluation bay who were assessed as being at risk or above, or had existing grade 2 or lower pressure damage, were placed on the Ultracore Plus mattress in addition to the skin assessments now routinely being undertaken.

## Results

During the first three weeks of the evaluation, six patients have used the Ultracore Plus mattress. No patient has developed pressure damage or expressed any dislike of the product.

One patient admitted with grade 2 pressure damage to the sacrum, has seen this resolve whilst another patient nursed on the mattress at end of life developed no pressure damage or Kennedy ulcers.

It was also felt, the addition of the routine skin checks, resulted in a higher awareness of pressure damage at an earlier stage of its development.

## Discussion

Confused and agitated elderly patients are seen on almost every ward in every hospital across the UK. The management of their falls and pressure ulcer risk is a challenge and as clinicians, we must ensure they are kept safe as well as their acute needs cared for.

The Patient Safety Thermometer helps Trusts monitor any adverse safety events and so prompts the putting in place of appropriate corrective actions.

In the evaluation, the introduction of Ultracore Plus on Holcot ward offered another option to manage these concerns.

## Conclusion

In this evaluation, the ward has been able to provide a safe environment for the patients whilst in bed by providing a high low bed and so reducing the risk of falls whilst at the same time providing effective and comfortable pressure redistribution with the Ultracore Plus mattress.

One patient who had been unable to find another mattress to be comfortable on, has now been on the mattress for two weeks without complaint.

1. Ousey K et al. 2015. Pressure Ulcers: are they a safeguarding issue in care and nursing homes? Wounds UK Vol 11 No 3 Suppl 2
2. EPUAP: 2014 Prevention and treatment of pressure ulcers: quick reference guide. Emily Haesler (Ed.) Cambridge Media: Osborne Park Australia
3. Patient Safety Thermometer. <https://www.safetythermometer.nhs.uk/>. Accessed 04.09.17