

# A simplistic approach to pressure ulcer prevention and management

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## Introduction

In line with the Government's ambition to reduce avoidable harm in the NHS by half by 2017, Yeovil District Hospital NHS Foundation Trust joined the 'sign up to safety' campaign and set out a clear safety improvement plan to ensure patients receive safe and effective care at all times.

Part of the Yeovil District Hospital safety improvement plan specifically targeted a significant reduction in avoidable pressure ulcers by 2017.

An essential element in pressure ulcer prevention is providing patients with a mattress which meets their clinical needs.

International pressure ulcer prevention and treatment guidelines<sup>1</sup> recognise that support surface selection should be individualised according to patients' pressure-redistribution needs and based on the following factors;

- level of immobility and inactivity;
- need for microclimate control and shear reduction;
- size and weight of the individual;
- risk for development of new pressure ulcers; and
- number, severity, and location of existing pressure ulcers

It is unrealistic to expect a single support surface to effectively manage all clinical needs for all patients in a 350 bedded district general hospital which includes A&E, orthopaedics, care-of-the-elderly and ITU.

A key goal for healthcare providers is to cover all pressure area care needs of their patient demographic while simplifying the selection of support surfaces and driving down pressure ulcer incidence.

The aim of the hospital Tissue Viability department at Yeovil District Hospital NHS Foundation Trust was to reduce overall pressure ulcer incidence and to specifically reduce preventable pressure ulcers by 50% from the 2012 - 2013 baseline by 2017.

As part of this objective Tissue Viability simplified support surface provision from three mattress types (foam, high-specification foam, alternating pressure air mattress replacement) to two.

## Method

The Tissue Viability team identified that their patients' pressure area care needs could be effectively met by adopting a two-product approach to pressure ulcer prevention. This involved 30% of beds having a top-end, full dynamic mattress replacement system (Talley QUATTRO® Acute, see Figure 1a) and the remaining 70% of beds



**FIGURE 1.**  
Talley QUATTRO®  
Acute, active therapy  
(full alternating pressure air  
mattress system)



**FIGURE 1b.**  
FUSION™ Response, reactive  
therapy (static air / foam hybrid  
mattress)

having a high quality static hybrid mattress such as the Talley FUSION Response (see Figure 1b).

Providing the correct mattress to each patient is covered as part of the SSKIN pressure ulcer prevention care-bundle. Support surfaces are allocated to patients based on the guidance set out in Figure 2;

MATTRESS TYPE	TREATMENT AIM AND RISK LEVEL				
	Pressure Ulcer Prevention			Pressure Ulcer Treatment	
	Low Risk	Medium Risk	High Risk	Category 1 or 2	Category 3 or 4
FUSION Response	FUSION Response	FUSION Response or QUATTRO Acute	FUSION Response or QUATTRO Acute	QUATTRO Acute	QUATTRO Acute

**FIGURE 2.**  
Trust guideline for the selection of pressure redistributing mattresses

## Results

The 2012 - 2013 pressure ulcer incidence baseline was 2.97 pressure ulcers per 1000 patient bed days. Post-adoption of the current two mattress approach (in 2014) there have been year on year reductions in pressure ulcer incidence within the hospital and the current figures report an incidence of 0.98 pressure ulcers per 1000 patient bed days (see Table 1);

YEAR	TOTAL NUMBER OF PRESSURE ULCERS	NUMBER OF BED DAYS	PRESSURE ULCERS PER 1000 BED DAYS
2012 - 13 (pre-implementation)	291	98,000	2.97
2013 - 14 (pre-implementation)	176	99,530	1.77
2014 - 15	174	107,442	1.62
2015 - 16	159	111,073	1.43
2016 - 17	110	112,665	0.98

**TABLE 1.**  
Annual pressure ulcer incidence and total number of bed days

This equates to a 67% reduction in hospital acquired pressure ulcers since the 2012 - 2013 baseline figure.

Both of the current pressure area care mattresses in use at Yeovil District Hospital are well liked by staff. Thirty three staff completed user acceptance questionnaires for the Talley QUATTRO Acute (an alternating pressure air mattress replacement system) and thirty one reported their views on the Talley FUSION Response (static hybrid). See Table 2:

STAFF VIEWS ON THE MATTRESS	STAFF FEEDBACK	
	QUATTRO Acute	FUSION Response
'Effective / very effective' at redistributing pressure and maintaining skin integrity	33/33 (100%)	27/31 (87%)
'Easy / very easy' to use	31/33 (94%)	25/31 (81%)
'Comfortable / very comfortable' for patients	28/33 (85%)	25/31 (81%)
Product reliability / quality was 'good / very good'	30/33 (91%)	30/31 (97%)

**TABLE 2.**  
Staff evaluation and feedback on the two current mattress systems

## Discussion

The results of this work clearly demonstrate that simplifying the support surface options within the hospital from three products down to two has worked well as there has been a corresponding reduction in pressure ulcer incidence post adoption of this new strategy.

Although support surfaces are only one part of a pressure ulcer prevention care bundle it is essential to ensure that any products adopted into practice are clinically effective. With over 325,000 bed days passing since adopting this new strategy and annual PU incidence reducing from 176 to 110, it is evident that the products adopted into clinical practice are meeting the pressure area care requirements for all patients within the hospital.

An essential element in successfully implementing any change in process is adopting products that are well liked and easy to use. The feedback from clinical staff on both products is very positive. Products that are effective, simple to set-up and comfortable for patients are more likely to be used at the right place, at the right time and for the right reasons.

## Conclusion

NHS improvement recognise that avoidable pressure ulcers are a key indicator of the quality and experience of patient care and whilst the goal of delivering harm free care to every patient is a clear focus and priority for all healthcare providers, these wounds remain a significant healthcare problem affecting approximately 700,000 people annually in the UK and costing the NHS in excess of £3.8 million every day.<sup>2</sup>

Simplifying support surface provision by adopting two clinically effective mattresses into practice can result in significant reductions in pressure ulcer incidence which is a key driver for all healthcare providers.

## References

1. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.
2. NHS Improvement. Stop the Pressure. Online resource available from: <http://nhs.stopthepressure.co.uk/> . Accessed 31st October 2017.

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