

An evaluation of the Transair Mattress Replacement System within two differing Acute Care settings

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Introduction

The ambitious visions for the future of Health Service provision have been clearly outlined by Lord Darzi (DOH 2008). In setting out to achieve the highest quality of care for patients and the public, the Commissioning for Quality and Innovation scheme (CQUIN) builds upon best practice found in the NHS and this system will form part of commissioning targets. The challenge for clinicians is the delivery of these targets within existing financial arrangements.

Although Doncaster and Bassetlaw Hospitals NHS Foundation Trust has had a proactive pressure ulcer prevention and management strategy in place for the last 16 years, the Tissue Viability Team has examined areas of their clinical practice to ensure that they meet the challenges which face the NHS in the 21st century at a time when budgetary constraints are apparent.

Background

These challenges are reflected in the demand driven by changing patient demographics and higher patient expectations. As these challenges are clear for all to see, the Tissue Viability Team has used this opportunity to examine whether an alternative option was available for the delivery of its pressure ulcer prevention and management strategy.

A crucial part of the pressure ulcer prevention and management strategy is the provision of pressure relieving devices.

Patients who are either “very high risk” of developing pressure ulceration, or patients who have sustained a pressure ulcer, are nursed on a dynamic pressure relieving mattress replacement system.

In view of the increasing number of patients requiring dynamic pressure relieving mattresses, the Tissue Viability Lead Nurse felt it was timely to explore the option of whether an alternative provider of pressure relieving devices was available. The Tissue Viability Team developed a list of key attributes that would be essential when looking for an alternative system. As the Karomed Transair Mattress Replacement System is clinically proven for the use in “high” to “very high risk” patients for prevention of pressure damage and treatment of up to “high grade” pressure damage and is widely used within a number of hospitals a decision was made to evaluate this system.

Method

Transair Mattress Replacement Systems were provided by Karomed and were installed into two differing clinical areas within the Trust. The clinical areas are as follows:-

- 32 bedded Acute Medical Ward specialising in respiratory medicine
- 23 bedded Department of Critical Care

Educational sessions were performed with regard to the Transair Mattress Replacement System using a predetermined educational package within each clinical area prior to the evaluation.

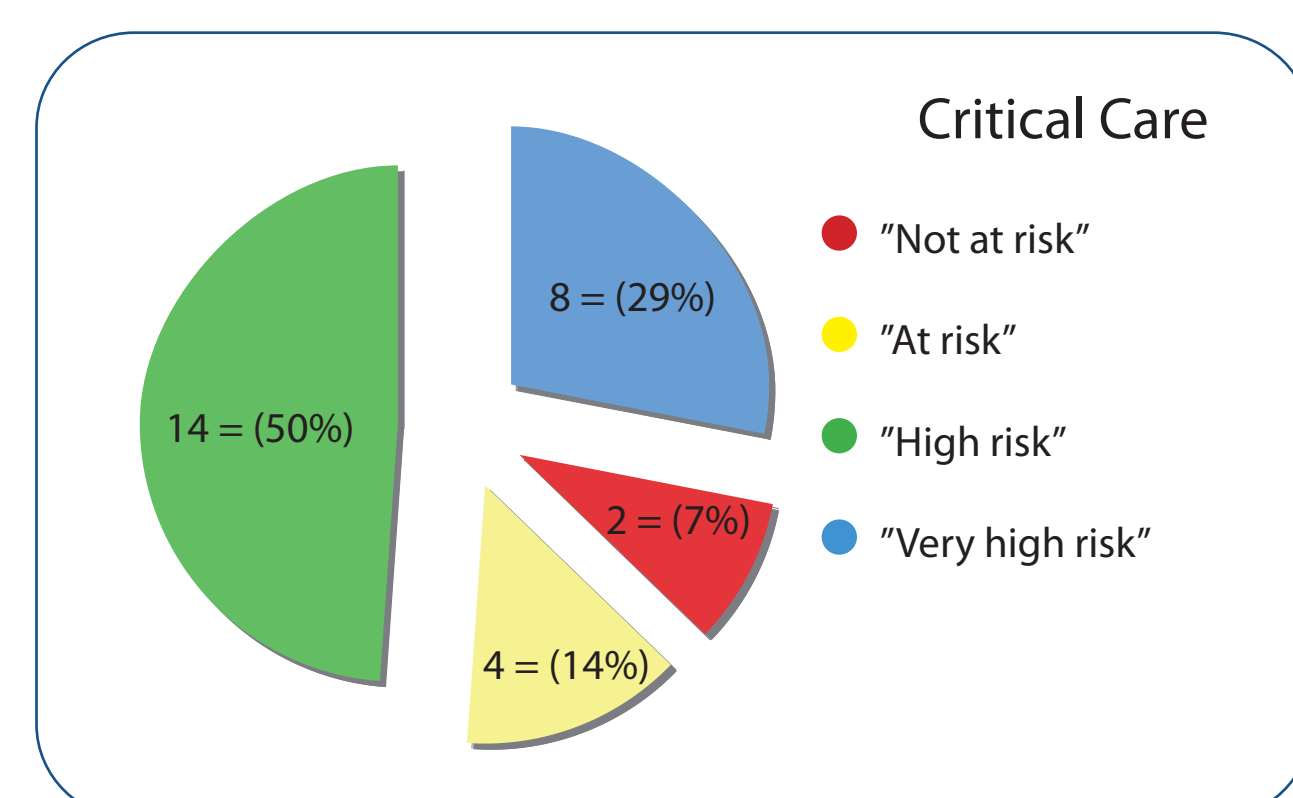
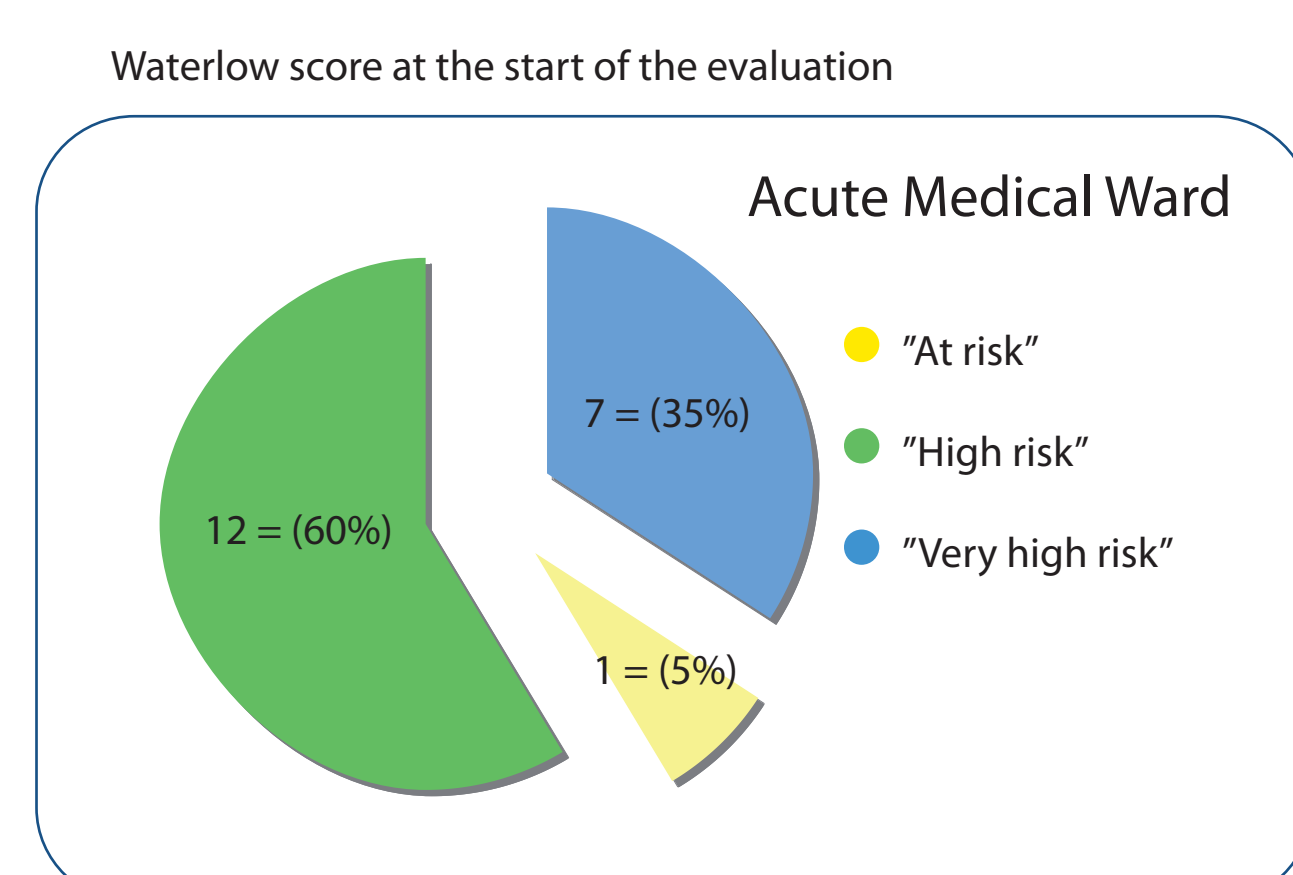
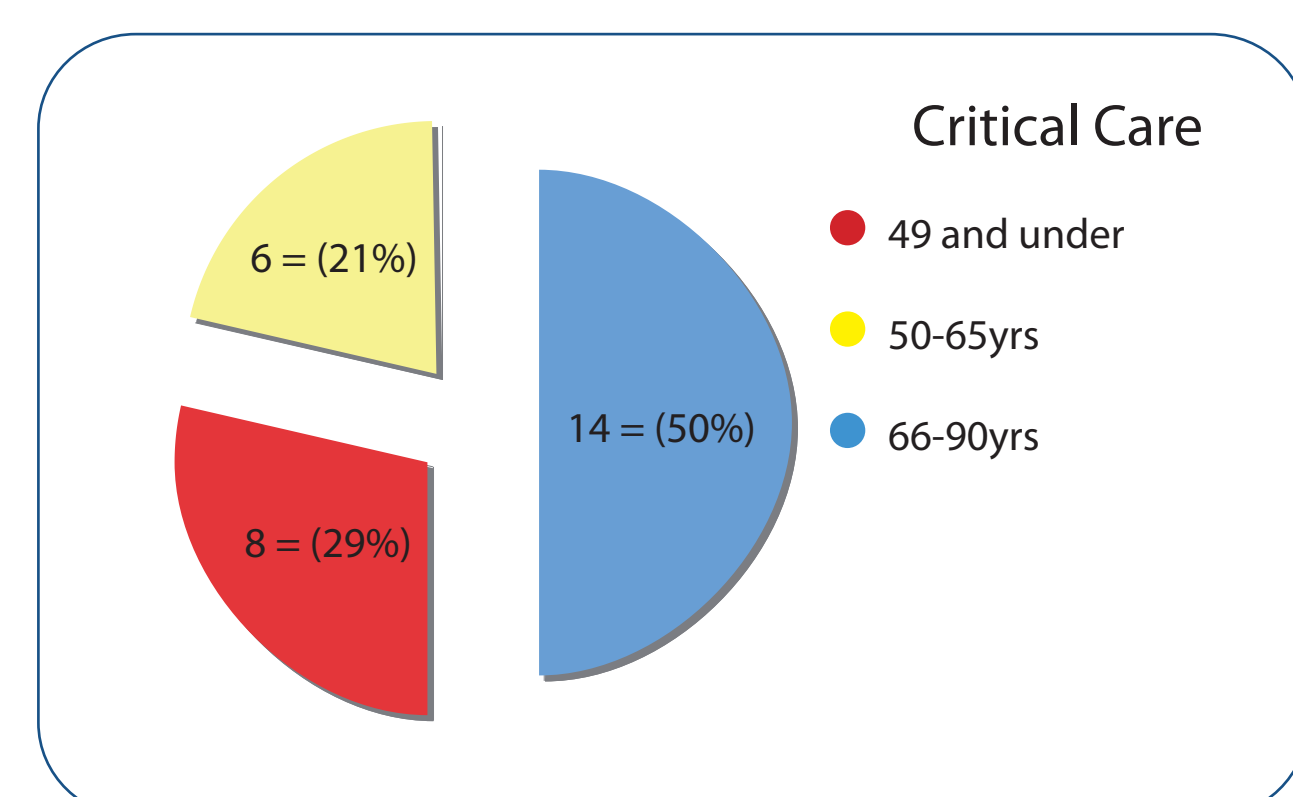
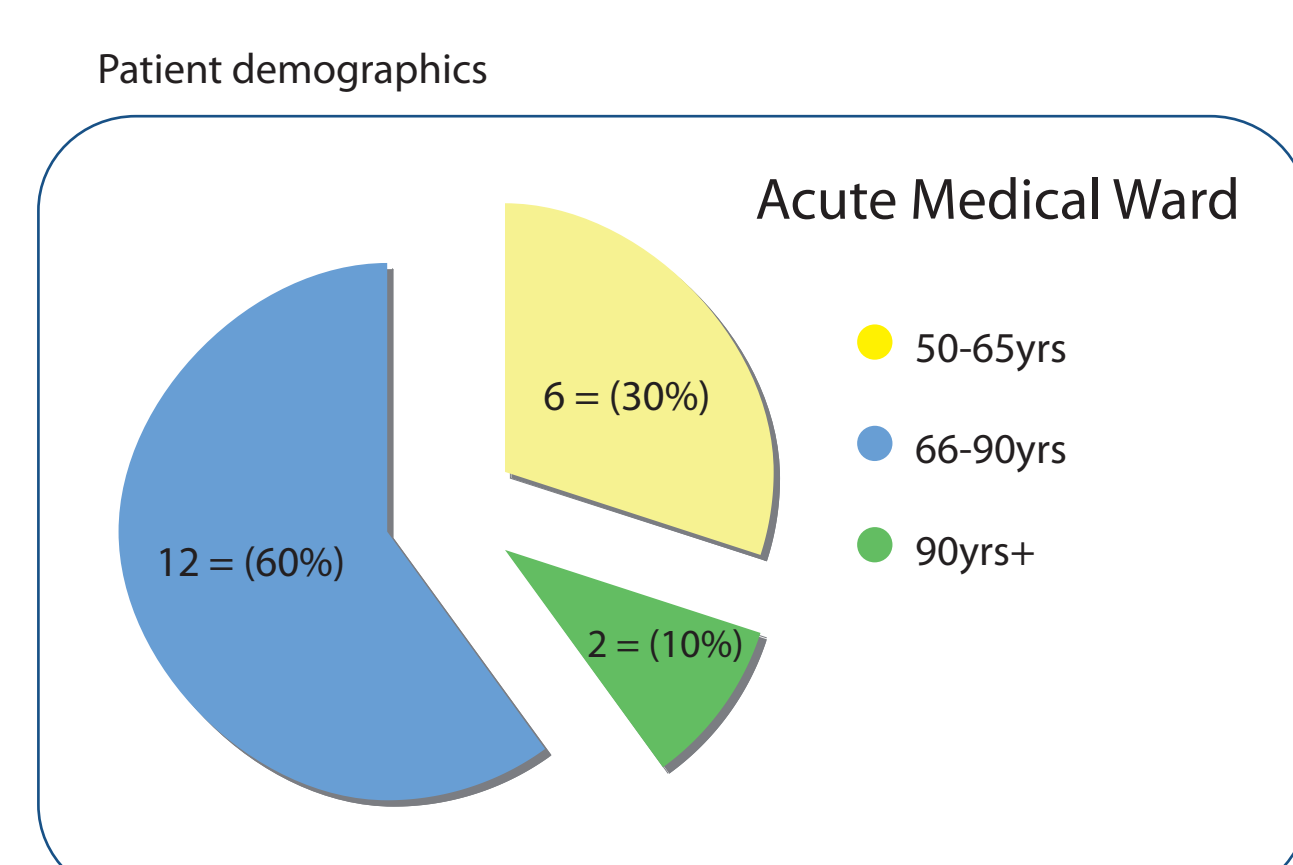
In both clinical areas the nursing teams were instructed to use the Transair Mattress Replacement Systems as per the existing Trust policy for “The Selection and Management of Pressure Relieving Devices”. On identifying a patient who would meet the clinical criteria of the Trust policy, the nursing staff would place the patient on Transair Mattress Replacement System accordingly.

During the evaluation 48 patients were nursed on the Transair Mattress Replacement Systems.

The nursing teams were required to complete the first page of the evaluation form that was developed by the Tissue Viability Lead Nurse at the start of the evaluation.

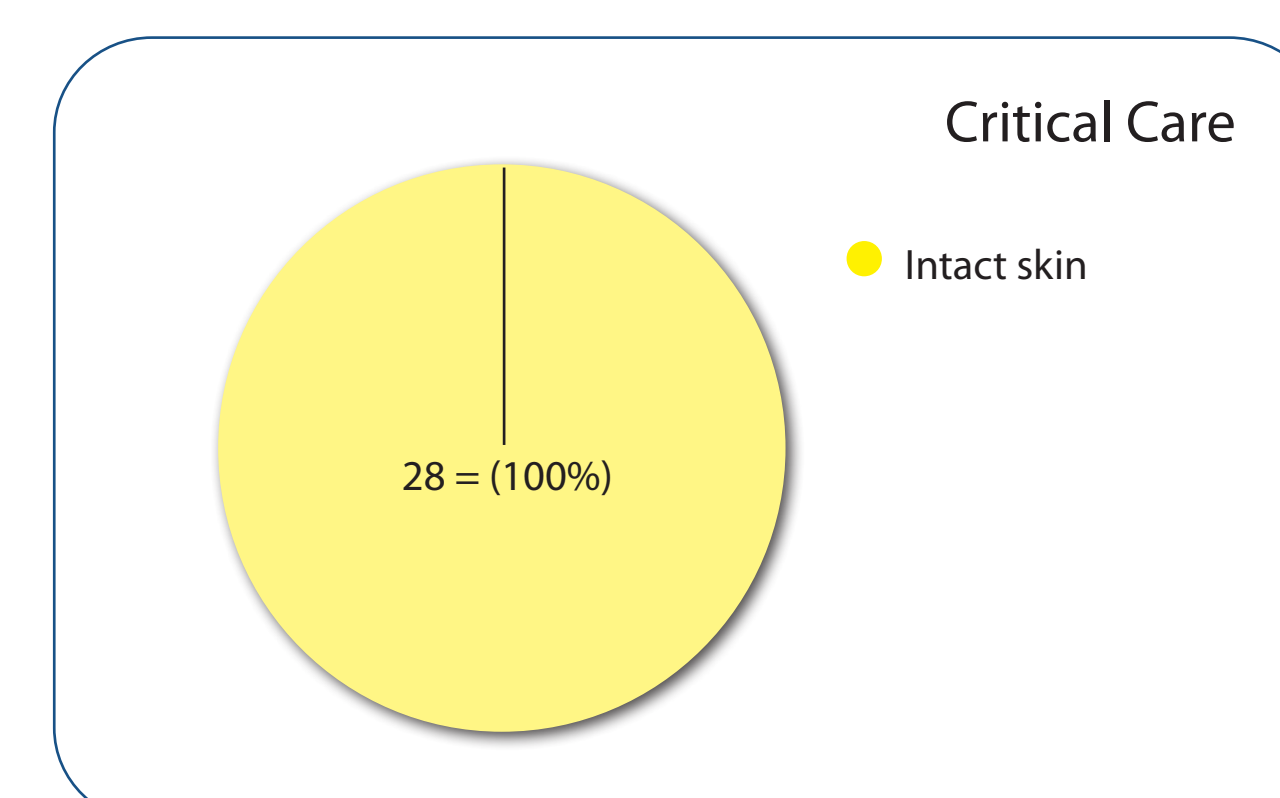
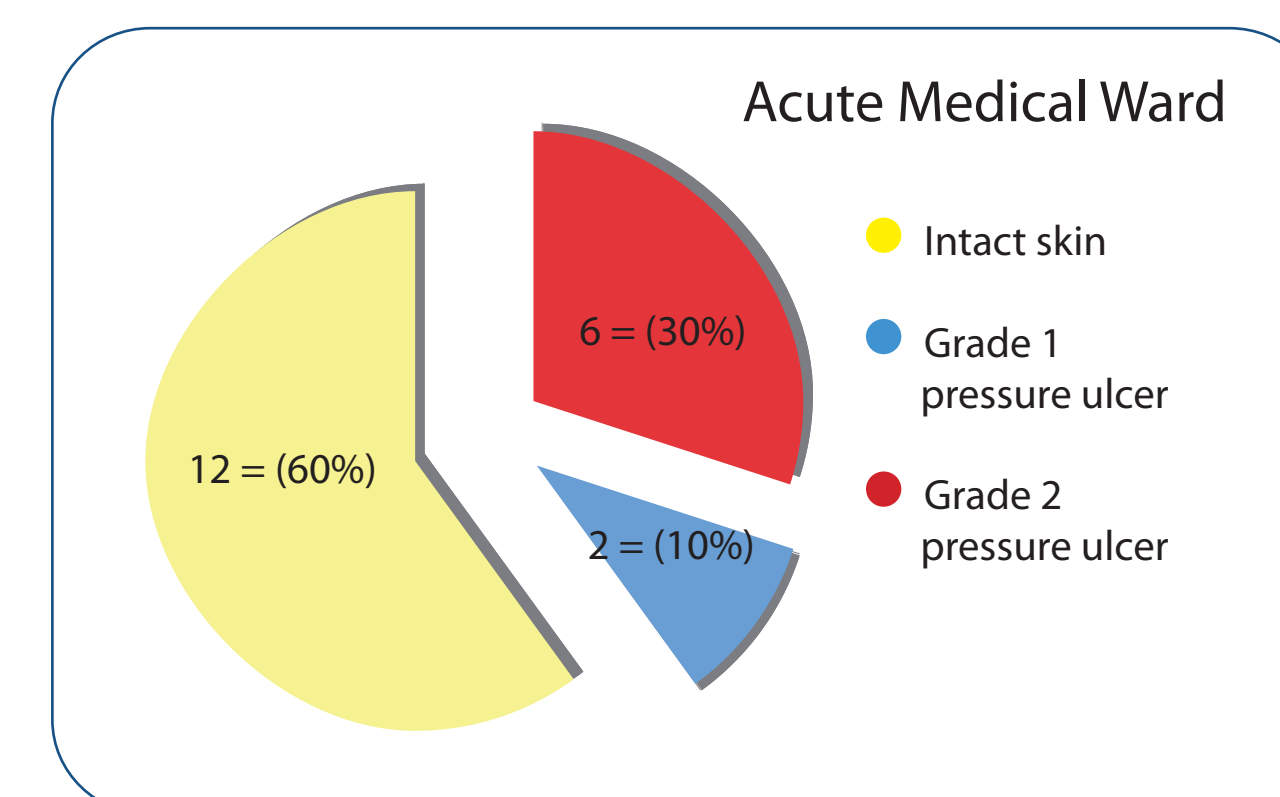
The form collected key information around the following areas:

- patient demographics
- patient weight and height
- diagnosis
- special risk factors
- how long the patient spends sat out of bed
- waterlow score at the start of the evaluation



All beds on the Critical Care Unit have dynamic pressure relieving mattresses insitu, this approach is reflected in the 2 patients being nursed on a Transair Mattress Replacement System who are identified as being “not at risk” at the start of the evaluation.

Condition of the patient's skin at the start of the evaluation



During the evaluation, the nursing staff were asked to complete further information as listed below which would illustrate further outcomes relating to the use of the Transair Mattress Replacement System, the results below summarise:

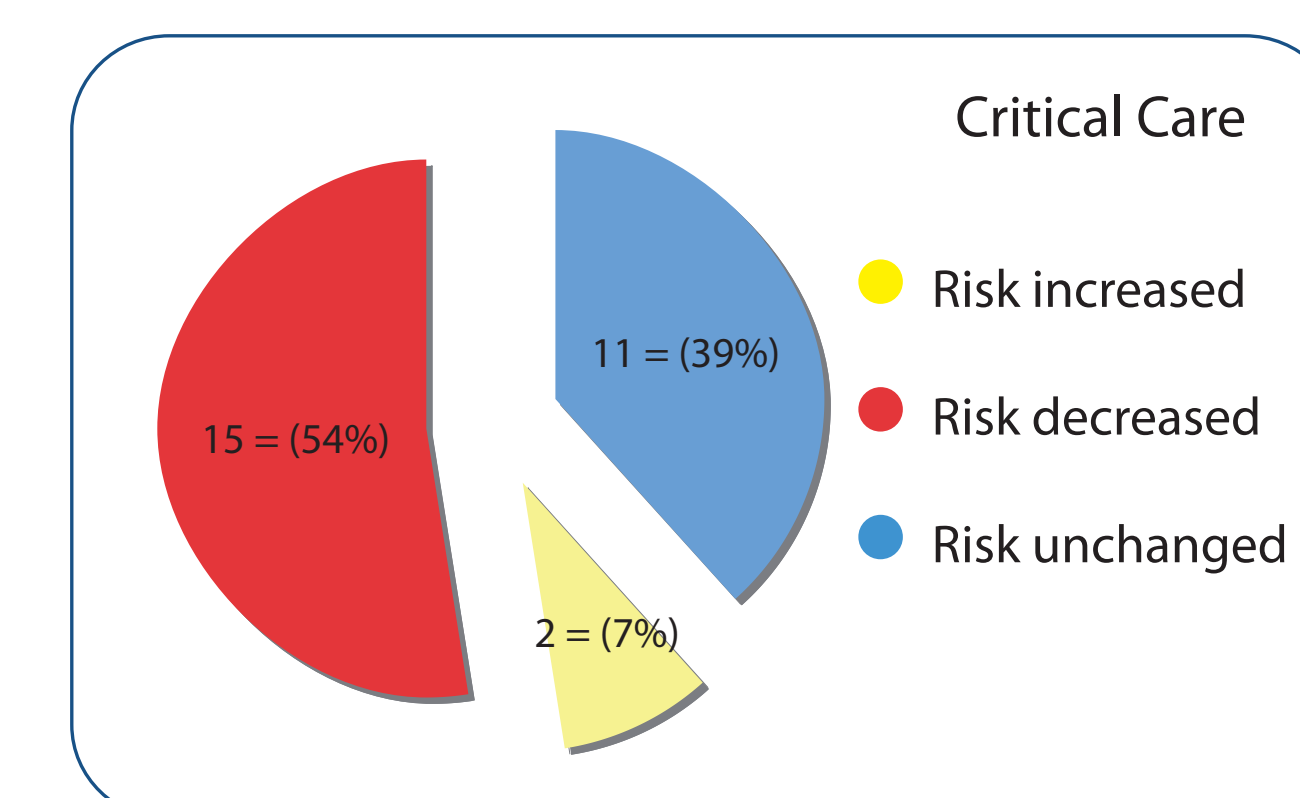
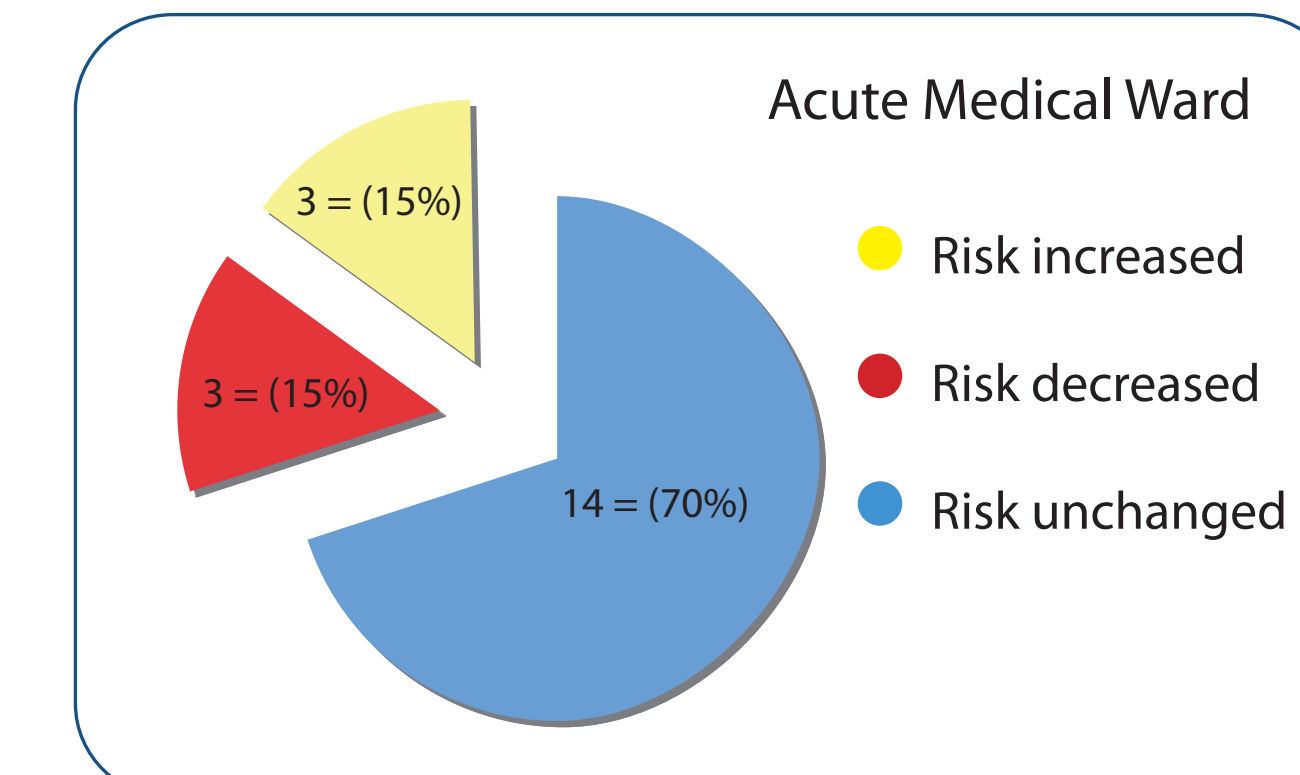
- patient comfort
- ease of patient transfer
- ease of cleaning
- quietness
- ease of installation
- ease of operation

Acute Medical Ward	Much easier than previous mattress	Same as previous mattress
How easy is it for the patient to get in and out of bed? (n/a for 6 patients)	3 (21%)	11 (79%)
How quiet is the pump?	17 (85%)	3 (15%)
Does the Patient find the mattress comfortable? (One patient n/a due to Alzheimer's and no verbal response)	19 (100%)	
How easy is the product to clean?	17 (85%)	3 (15%)
How easy is the product to install?	16 (80%)	3 (15%)
How easy was the product to operate?	13 (65%)	6 (30%)

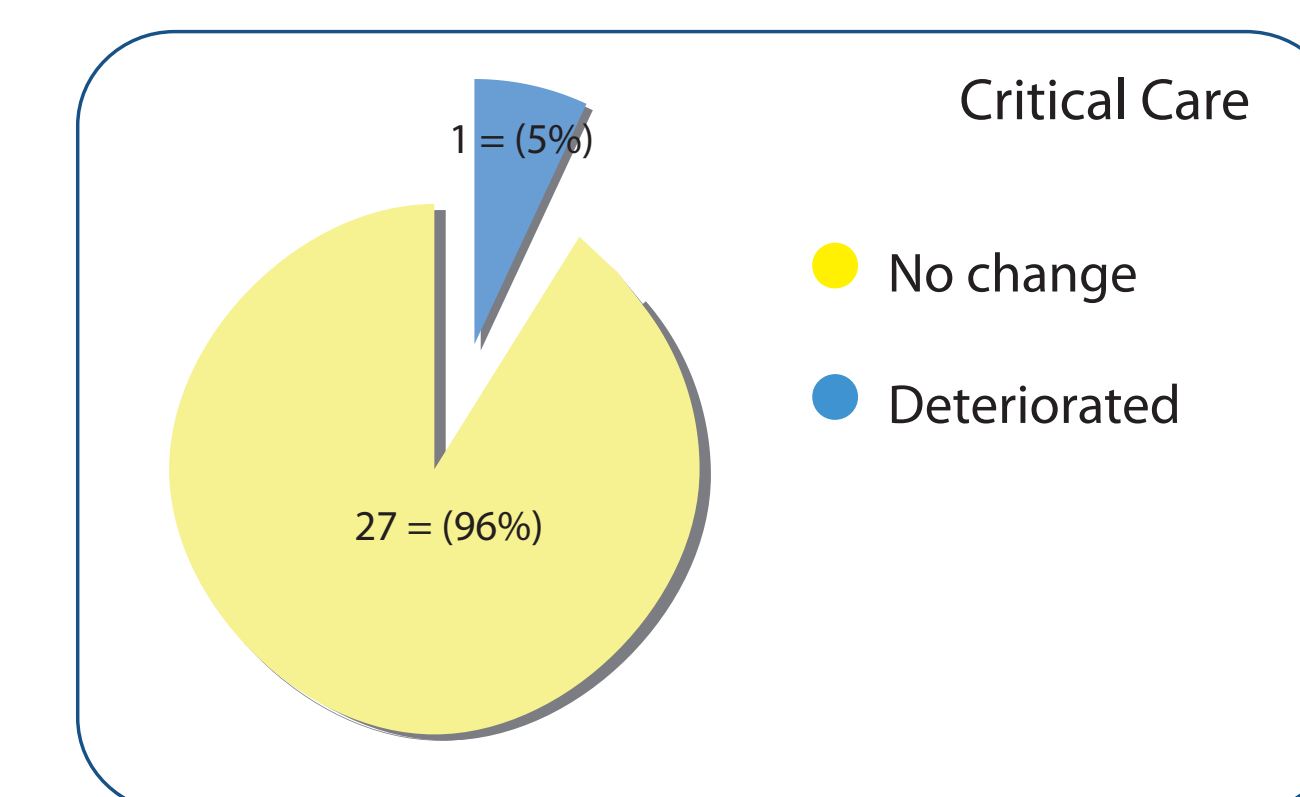
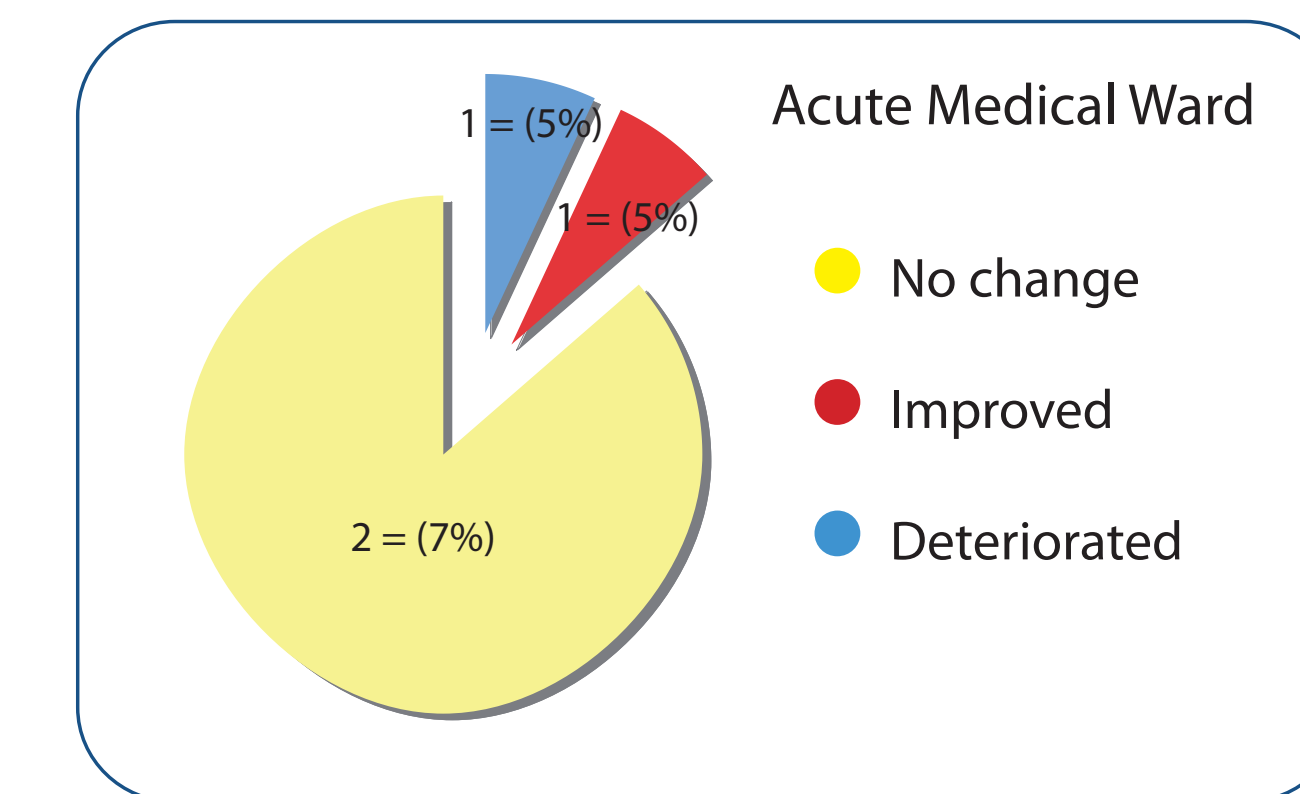
Critical Care	Much easier than previous mattress	Same as previous mattress	More difficult than the previous mattress
How easy is it for the patient to get in and out of bed? (n/a for 11 patients)	3 (18%)	12 (70%)	2 (12%)
How quiet is the pump? n/a 1 patient	16 (60%)	9 (33%)	2 (7%)
Does the Patient find the mattress comfortable? 4 Patients n/a RIP (1 no answer (1) sedated (2))	21 (87%)	3 (13%)	
How easy is the product to clean? n/a 5 patients	13 (57%)	9 (39%)	1 (4%)
How easy is the product to install? n/a 14 patients	6 (43%)	6 (43%)	2 (14%)
How easy was the product to operate? n/a 1 patient	8 (30%)	12 (44%)	5 (19%)

In order to evaluate the clinical effectiveness of the Transair Mattress Replacement System detailed clinical information has been collected in relation to:

Waterlow score at the end of the evaluation



Condition of the patient's skin at the end of the evaluation



NB The analysis of the data from the evaluation shows that the deterioration of both patients skin was not due the clinical effectiveness of the Transair Mattress Replacement System.

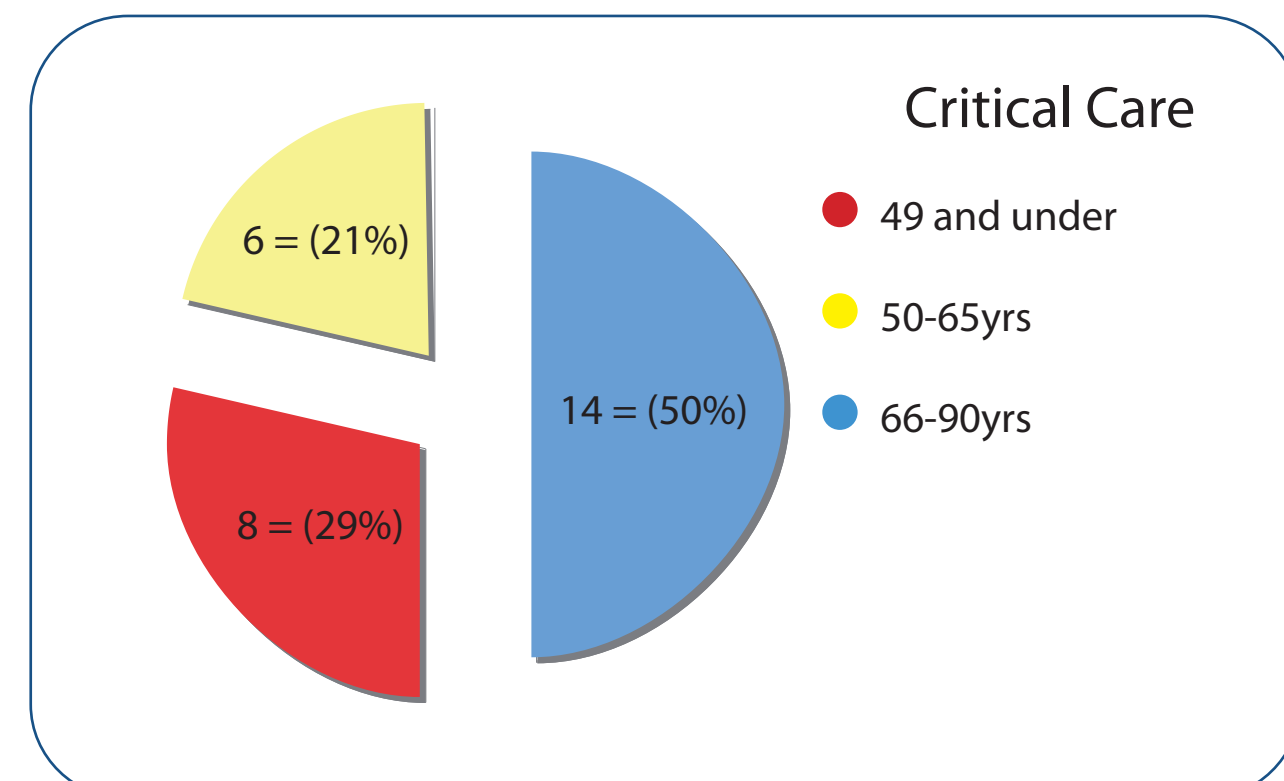
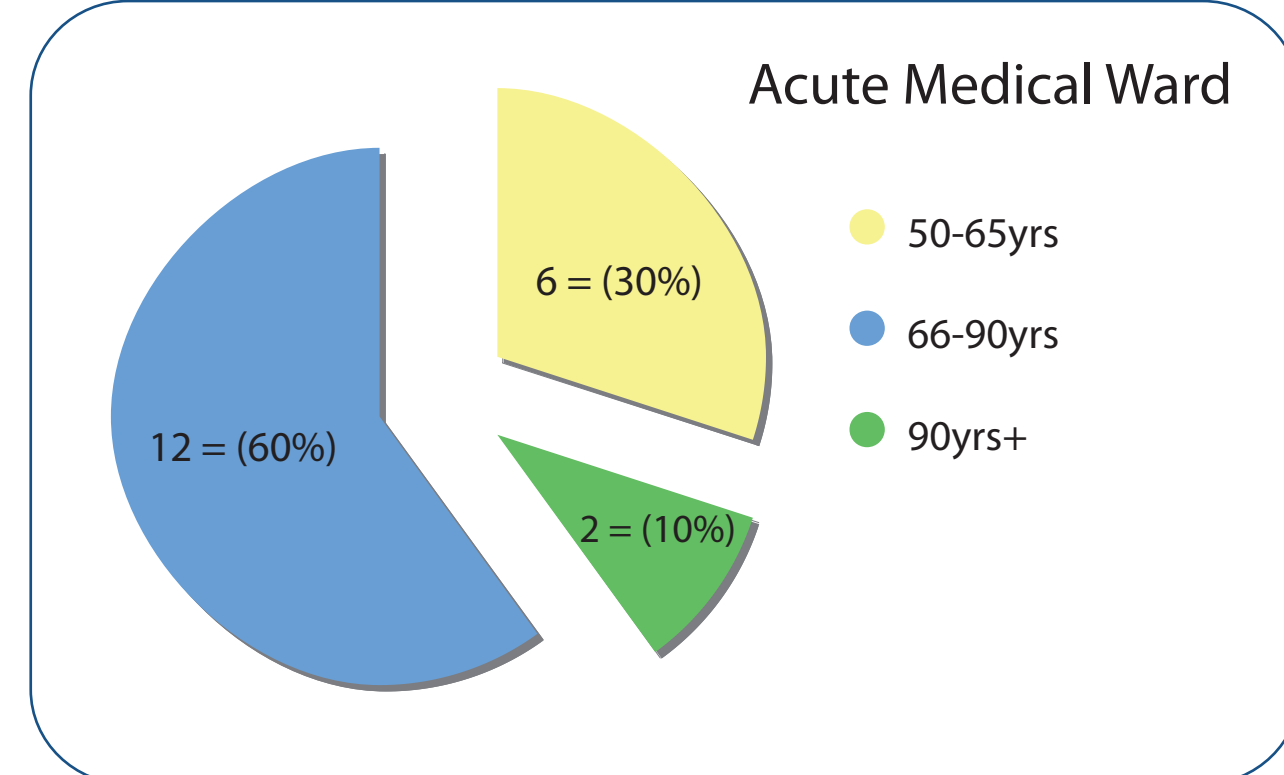
Conclusion

From this evaluation the Tissue Viability Team has been able to review the existing Trust policy for “The Selection and Management of Pressure Relieving Devices”. The team has critically reviewed its current practice in order to seek an alternative option which is both clinically and cost effective for the management of patients who are either “very high risk” of developing pressure ulceration or for those patients who have sustained a pressure ulcer. Following the conclusion of this evaluation the Trust has purchased a number of Transair Mattress Replacement Systems.

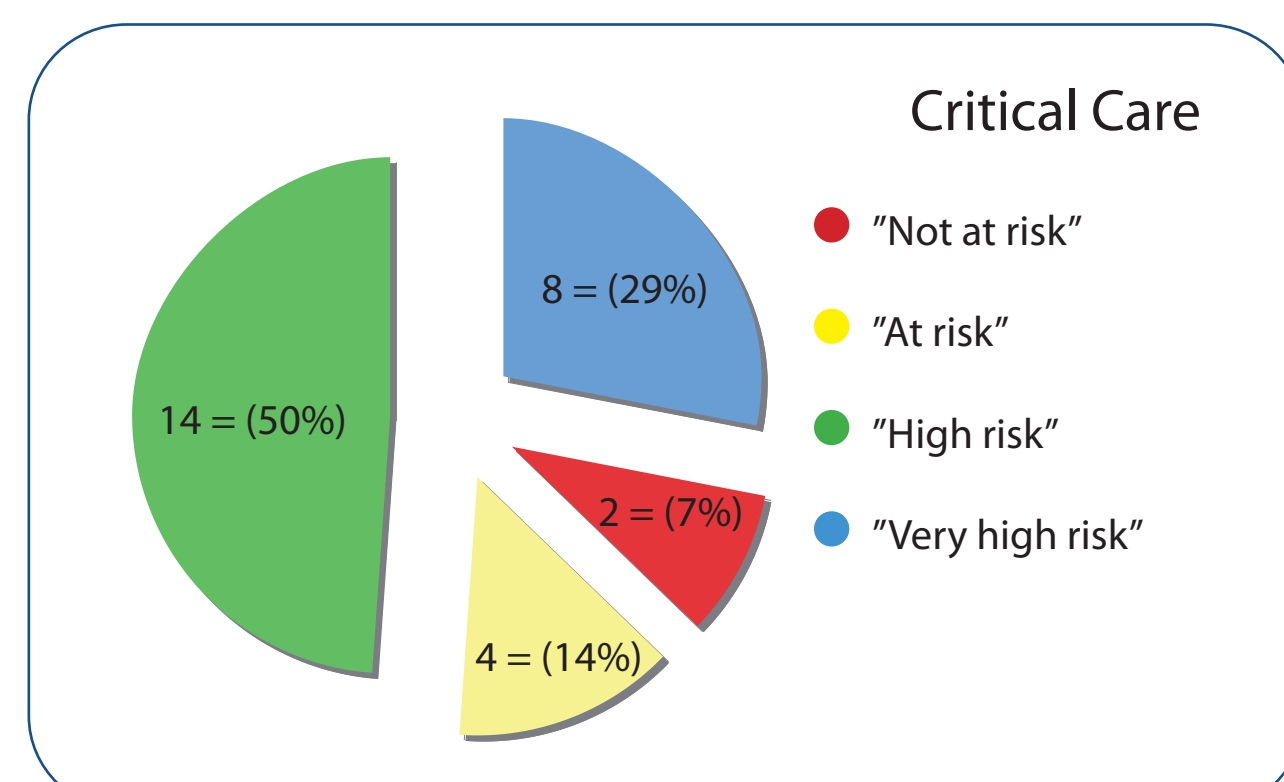
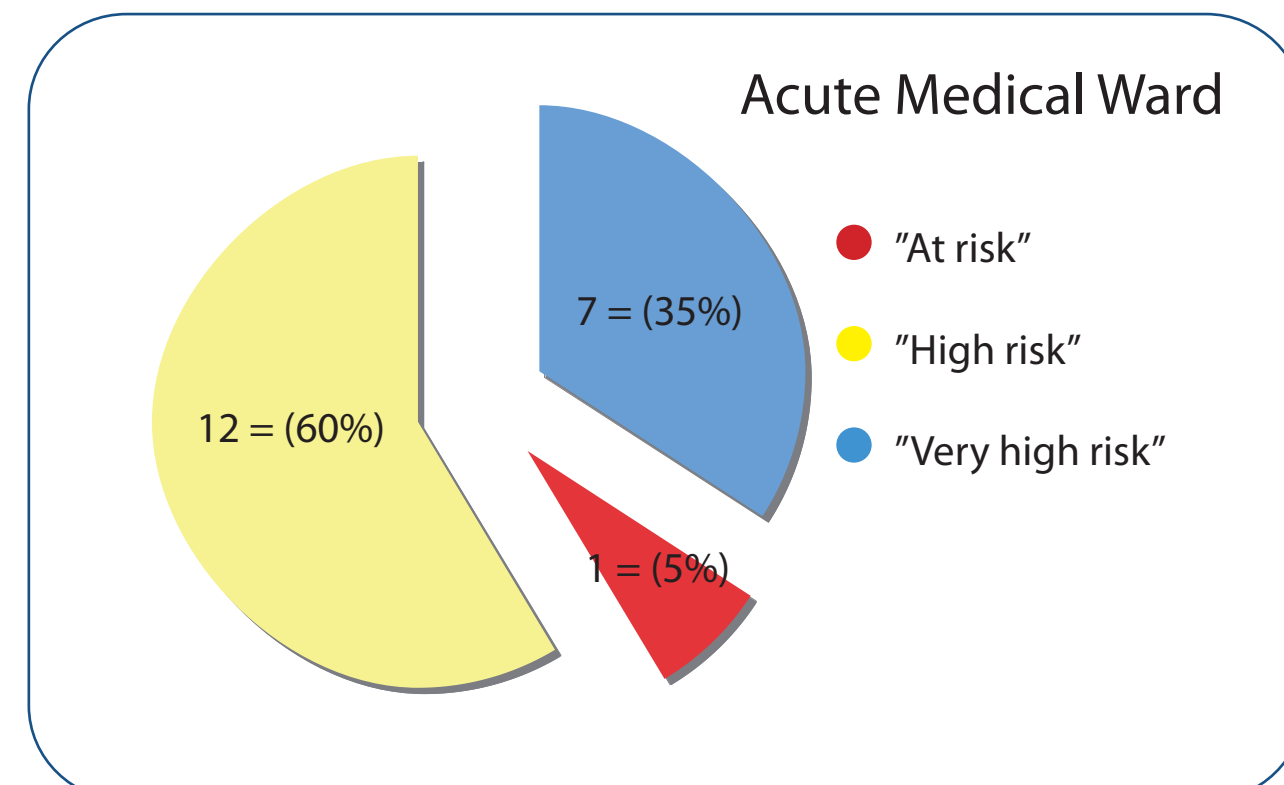
References

Department of Health (2008). *High quality care for all: NHS Next Stage Review final report* London: DH.

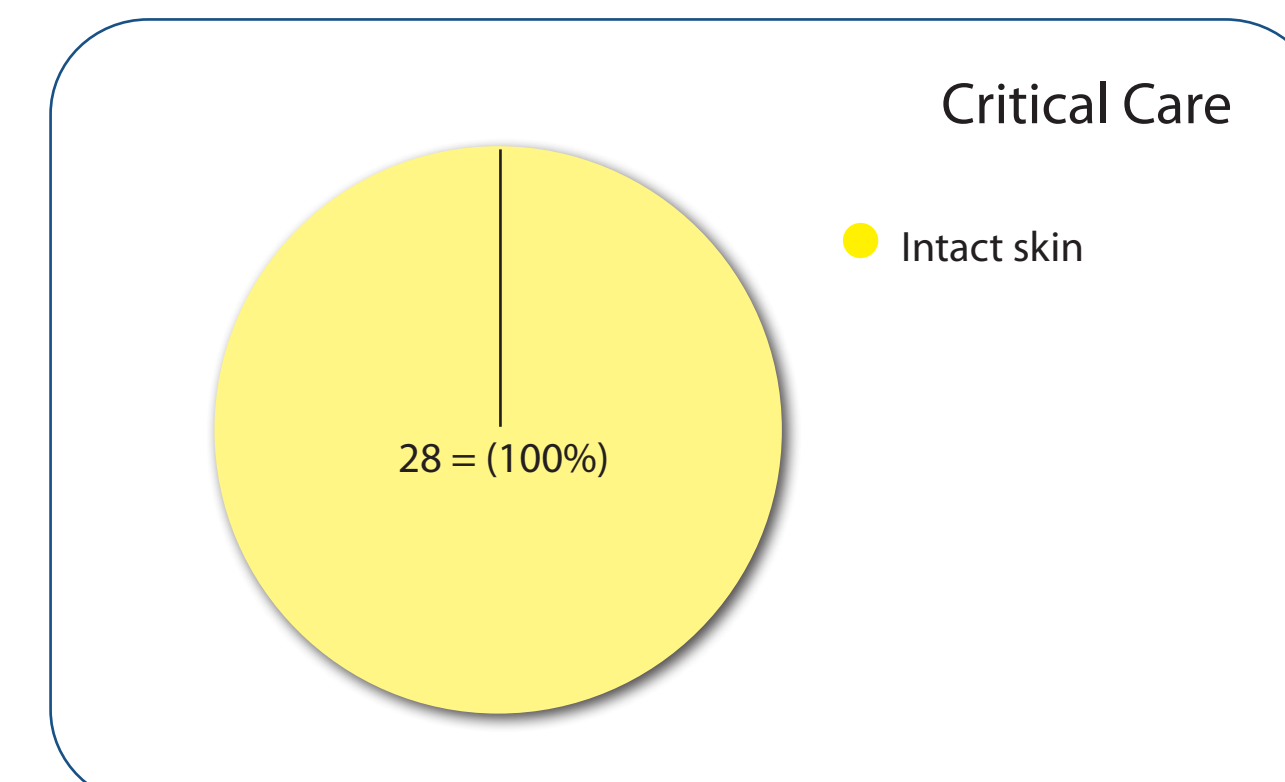
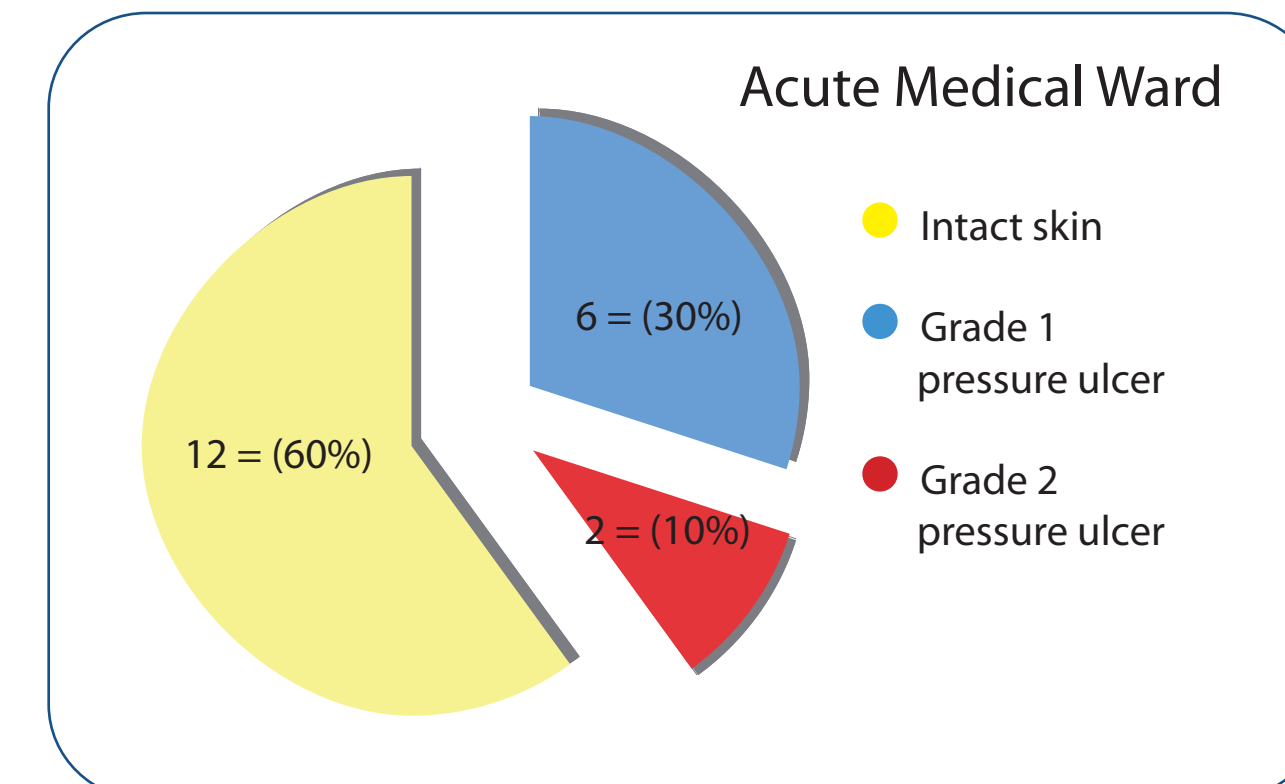
Patient demographics



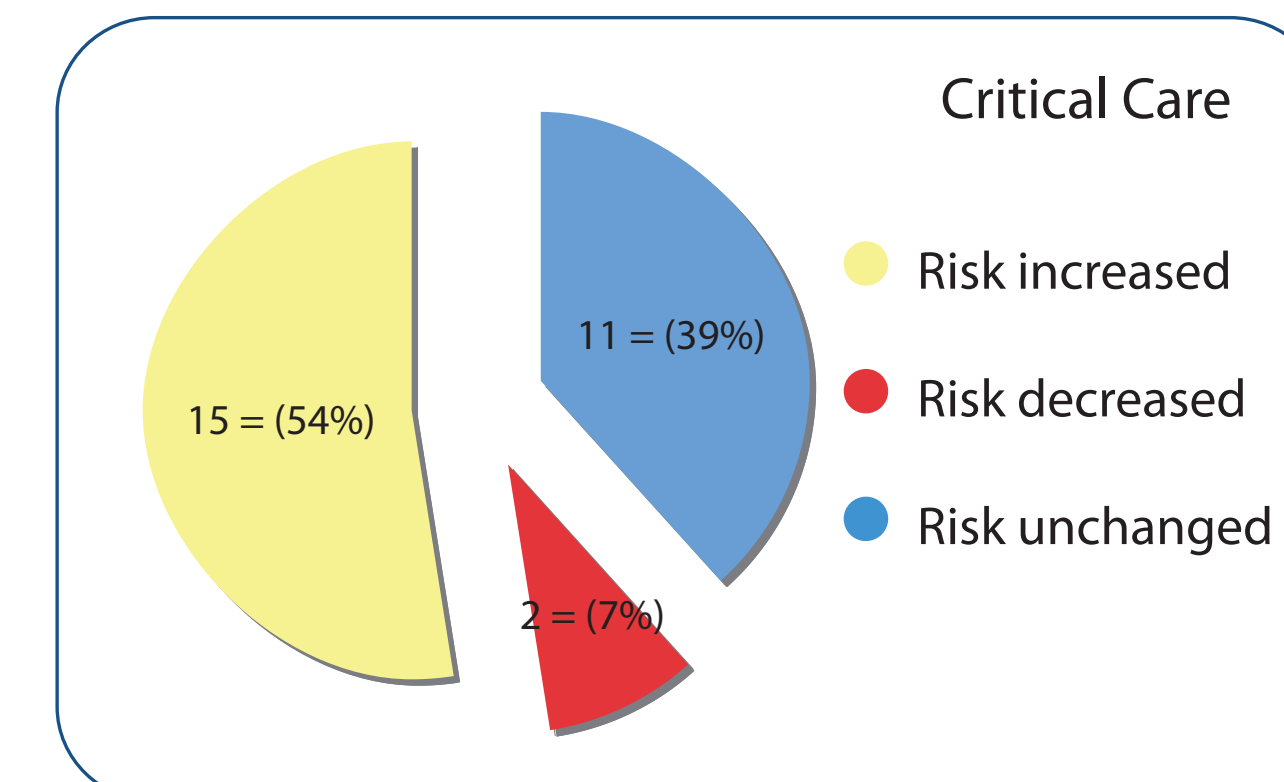
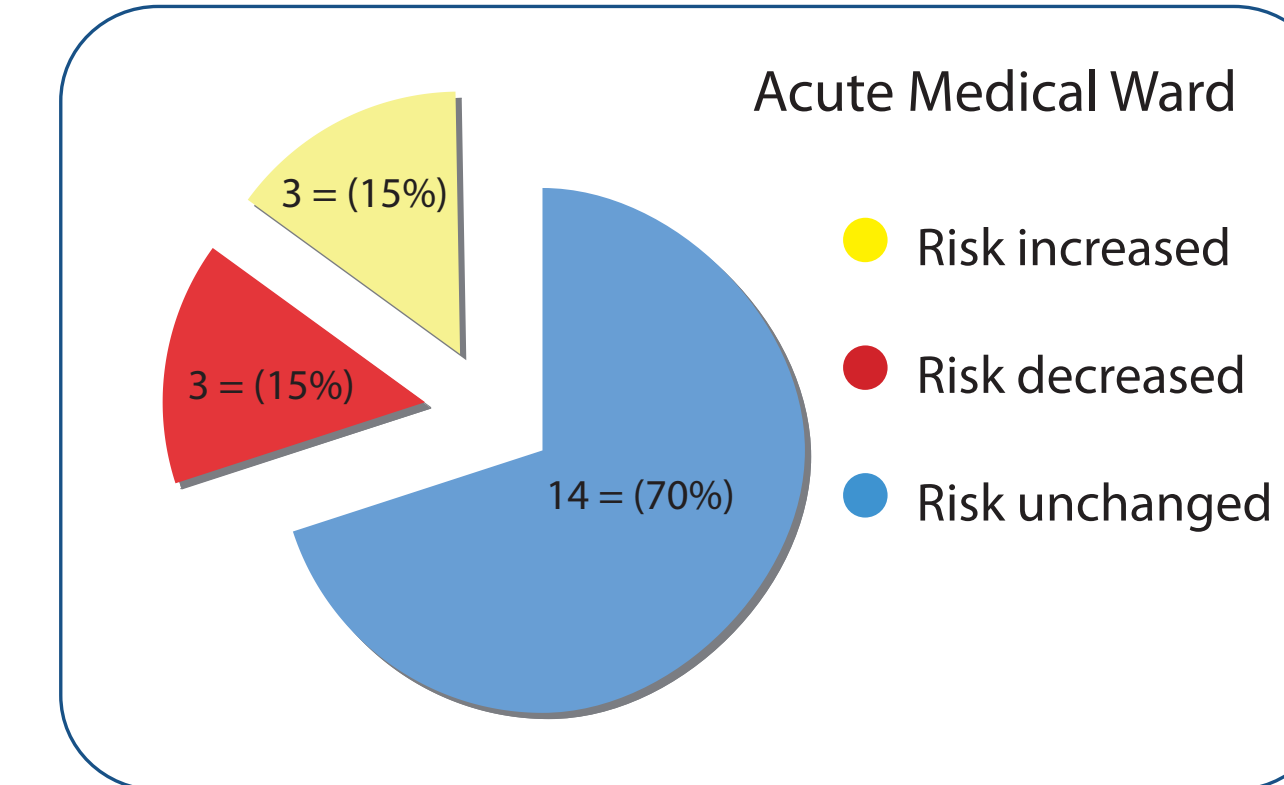
Waterlow score at the start of the evaluation



Condition of the patient's skin at the start of the evaluation



Waterlow score at the end of the evaluation



Condition of the patient's skin at the end of the evaluation

