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WOUNDS UK ANNUAL CONFERENCE, HARROGATE 2017

Clinical evaluation of an active therapy support surface within a critical care unit

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Introduction

Pressure ulcers are recognised as an avoidable patient harm and represent a key quality indicator for all healthcare providers. The elimination of avoidable pressure ulcers remains a priority within the NHS. [1]

Preventing pressure related tissue injury is all about effectively offloading pressure from patients' tissues. In normal circumstances this is done by combining a suitable support surface with a patient specific repositioning schedule.

Critical care which includes high dependency units (HDU) and intensive care units (ICU) can be a particularly challenging environment in the prevention of avoidable pressure ulcers due to a combination of caring for very ill patients who are often too sick to be regularly re-positioned.

As part of a comprehensive care package, the use of an active therapy support surface is often essential to assist with the prevention of pressure related skin damage. International pressure ulcer prevention and treatment guidelines recommend the use of active therapy support surfaces *'for individuals at higher risk of pressure ulcer development when frequent manual repositioning is not possible'*. [2]

Therefore for critical care patients who cannot be regularly repositioned, the use of an active therapy support surface is an accepted intervention. The key issue for healthcare providers is to determine which active therapy mattress offers suitable levels of tissue offloading and meets the clinical requirements of their most dependent patients.

FIGURE 1.
The QUATTRO Acute active therapy support surface from Talley

Aims

The primary aim of this evaluation was to capture the clinical progress/skin status of patients nursed on the QUATTRO® Acute in the critical care setting, to ensure they all remained free from pressure related tissue injury. Secondary aims include reporting on the user acceptance of the QUATTRO Acute and to document wound progress for any patients with existing pressure ulcers.

Poster Presentation: QUATTRO® Acute System

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Method

The evaluation took place on a 14-bedded critical care unit catering for level 2 (high dependency) and level 3 (intensive care) patients.

The Talley QUATTRO Acute active therapy support surface (see Figure 1) was evaluated on the unit and used in line with local Trust guidelines.

Patient demographics recorded included age, sex, relevant co-morbidities, pressure ulcer risk level, history of previous and existing pressure damage and nutritional status.

Patient progress was reported weekly and user acceptance of the support surface was determined by structured questionnaires using Likert scales upon completion of the evaluation.

Results

Five patients completed the evaluation on the QUATTRO Acute, 4 males and 1 female (one level 3 and four level 2 patients). Mean age was 78 years and length of stay on the mattress was up to 6 days. None of the patients had pre-existing pressure ulcers on admission to the evaluation.

Pressure ulcer risk was determined using the Purpose T pressure ulcer risk assessment tool. [3] All patients were assessed as being 'at risk' and placed onto the primary prevention pathway. Four hourly re-positioning regimes were undertaken for four out of the five patients, with one patient sitting out for 2 to 4 hours per day and able to reposition independently whilst on the mattress.

None of the patients developed any pressure related tissue damage during the evaluation.

Six staff provided feedback and reported that the QUATTRO Acute was reliable, easy to use, and effective in pressure redistribution and maintaining patients skin integrity.

Discussion

The QUATTRO Acute has been effective in the prevention of pressure related tissue damage for patients nursed within the critical care unit.

When dealing with such a vulnerable, high risk patient cohort their pressure ulcer risk is further compounded by their inability to reposition themselves independently and/or the fact that they have a limited number of positions they can be nursed in.

In this situation it is imperative that the support surfaces chosen by clinicians offer optimal pressure relief and redistribution and that the tissue offloading offered by these products is sufficient to safeguard patients by reducing the risk of pressure ulceration.

Not all alternating pressure air mattresses are the same, therefore evaluating products in the correct clinical setting allows clinicians to make an informed choice when prescribing support surfaces to their patients.

Conclusion

Critical care typically looks after the most clinically dependent patients in the acute care setting and providing safe, harm free care for this patient cohort can be a real challenge for clinical staff.

From a pressure ulcer prevention perspective, ensuring that the support surfaces used in the critical care setting are fit for purpose reduces the risk of pressure ulcer incidence even in the most dependent patients.

References

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3. Nixon J, Nelson EA, Rutherford C et al (2015) Pressure UlceR Programme Of reSEarch (PURPOSE): using mixed methods (systematic reviews, prospective cohort, case study, consensus and psychometrics) to identify patient and organisational risk, develop a risk assessment tool and patient-reported outcome Quality of Life and Health Utility measures. Southampton (UK): NIHR Journals Library, Programme Grants for Applied Research

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