Healing Present-on-Admission Pressure Ulcers: The Role of Education and Equipment Provision

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Introduction

While many acute hospitals are effectively reducing the number of hospital-acquired pressure ulcers, Chesterfield Royal Hospital wanted to ensure that in addition to achieving this target, patients admitted with existing pressure ulceration were discharged with their pressure damage improving and progressing towards healing.

Method

Patients admitted to Chesterfield Royal Hospital between May 2016 and April 2017 were assessed for existing pressure damage. The hospital does not record the number of patients admitted with category 1 pressure damage, as there are no quality and monitoring standards available and the guidance does not require this information to be gathered (National Institute for Health and Care Excellence, 2015).

A total of 1,237 patients were admitted to Chesterfield Royal Hospital with existing pressure damage between May 2016 and April 2017. Following application of the inclusion and exclusion criteria (see box 1), 100 patients were eligible for the audit. Patients were excluded if they had poor prognosis as this would potentially cause the skin to be compromised and have a negative impact on wound healing. Patients admitted with suspected deep tissue injuries (sDTIs) were also excluded, as any improvement would be difficult to measure, not knowing the full extent of the skin damage. Category 2 PUs were excluded due to the limited resources the tissue viability team had to review and follow up the many patients admitted with superficial ulceration.

Inclusion Criteria	Exclusion Criteria
Category 3 pressure ulcers(s)	Category 2 pressure ulcer(s)
Category 4 pressure ulcers(s)	Suspected deep tissue injuries
Surface area ≥5cm^2	All pressure ulcers with a surface area ≤5cm^2
≥50% eschar in the wound bed	Patients with poor prognosis

Box 1: Inclusion and exclusion criteria

Results

Of the 100 patients who met the inclusion criteria, 45% had a category 3 pressure ulcer, 21% had a category 4 pressure ulcer and 34% were unstageable.
78% had an improvement in their PU prior to discharge, with an average reduction in surface area of 9cm^2, representing a 40% reduction in size. The final condition of the patients' pressure ulcers upon discharge, at an average time of 15 days, can be seen in figure 1.

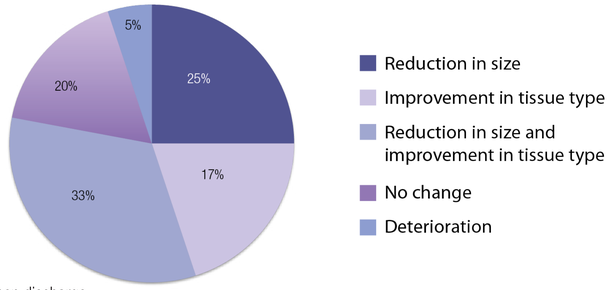

Figure 1: Final condition of patients' pressure ulcers upon discharge

Pressure ulcers remained static in 17 patients with no improvement or deterioration being noted. There was a deterioration in the condition of 5 patients' PUs, however, it was later found that these patients were approaching the end stages of life and passed away within 2 weeks of their final PU assessment.

Discussion

Consideration was given to both internal and external factors that contributed to the improvements noted from admission to discharge. All patients were nursed on air alternating-pressure mattresses (either a dynamic system or hybrid in alternating mode) and cushions, with their heels being offloaded. Patients had at least twice daily skin checks and 2–4-hourly repositioning regimens, depending on individual tissue tolerance. Where appropriate, patients were referred to a dietician and/or commenced on a nutritional support menu. All of these factors are known to help in the prevention and treatment of PUs and are the basis for the SSKIN bundle developed by NHS Midlands and East.

> "One of the key factors the tissue viability team believe played a significant role in improving existing pressure ulceration and also in reducing hospital-acquired pressure ulceration is the implementation of the Dyna-Form® Mercury Advance hybrid pressure mattress across the surgical and medical divisions, allowing 'at risk' patients to be 'stepped up' to a dynamic system at the point of need, i.e. directly on admission."

Although 403 patients with category 3 or above pressure ulcers, sDTIs and poor prognosis were not included in this audit, their pressure damage at discharge was noted and it was found that pressure ulceration had healed in 93 (23%) during their hospital stay.

Conclusion

The majority of PUs present on admission to hospital are small and superficial in nature. It is possible to significantly reduce the size and improve the tissue type of category 3 and above PUs within a 2-week period with the use of appropriate surfaces, regular repositioning, good skin care and nutrition, and progress these ulcers towards healing in a timely fashion.