

Abstract

Background: Turning is considered to be an effective way of preventing pressure ulcers, however almost no research has been undertaken on this method.

Aim: The aim of the study was to investigate the effect of four different preventative regimes involving either frequent turning (2, 3 hourly) or the use of a pressure-reducing mattress in combination with less frequent turning (4, 6 hourly). Eight hundred thirty-eight geriatric nursing home patients participated in the study.

Interventions

The following various turning schedule combinations were evaluated:

- turning every 2 hours on a standard institutional mattress
- turning every 3 hours on a standard institutional mattress
- turning every 4 hours on a viscoelastic polyurethane foam mattress (Tempur-Med.)
- turning every 6 hours on a viscoelastic polyurethane foam mattress (Tempur-Med.)

Results

The combination of turning every 4 hours and using the Tempur-Med.® mattress significantly decreased the number of pressure ulcers, even in comparison with turning every 2 hours on a standard institutional mattress. Although there was no significant difference in the incidence of non-blanchable

erythema (Stage I) in the 4 study groups, the incidence of Stage II, III, and IV pressure ulcers in the 4-hour turning plus Tempur-Med.® mattress group was 3% as compared to incidence in the other groups, which varied from 14.3% to 24.1%. This translates into an 85% reduction in the incidence of pressure ulcers in comparison to the standard care protocol where residents received preventative nursing care based on the clinical judgment of the nurses.

Conclusions

The performance of the Tempur-Med.® mattress, in combination with a 2–4 hour turning schedule, gives staff a margin of safety in the execution of optimal pressure ulcer-prevention measures. The study showed that turning every 4 hours on the Tempur-Med.® mattress resulted in a significant reduction in the incidence of pressure ulcers, and made a turning protocol, used in conjunction with the Tempur-Med.® mattress, a feasible method of prevention in terms of cost and staff time.

Studies were performed by Tempur-Pedic Medical.

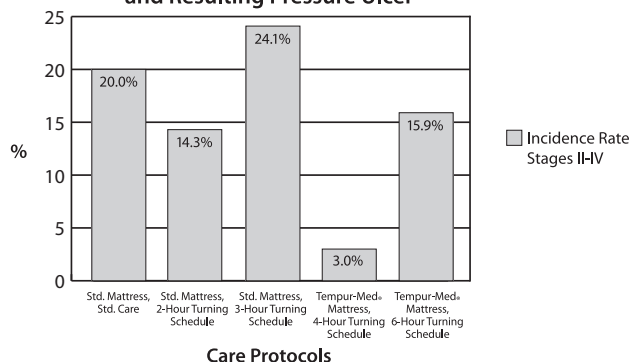
¹ DeFloor, T., DeBacquer, D., and Grypdonck, M. (2005). The Effect of Various Combinations of Turning and Pressure Reducing Devices on the Incidence of Pressure Ulcers, *International Journal of Nursing Studies*, 42 (2005), 37-46.

NOTE: As with any case study, the results reported should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's physical condition. Unless otherwise specified, any economic value or savings reported is based on data provided by the facilities and observations of the individuals involved in the study.

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**Varied Care Protocols
and Resulting Pressure Ulcer**



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