

Abstract

There are few and conflicting studies of the effectiveness of alternating pressure air mattresses (APAM) for the prevention of pressure ulcers. The purpose of this randomized controlled study is to evaluate whether an APAM is more effective than or equally as effective as a Tempur-Med® mattress in the prevention of pressure ulcers.

Interventions

447 patients identified as at risk for the development of pressure ulcers by either the Braden Scale or by the presence of non-blanchable erythema were randomized equivalently into either the experimental group, the alternating pressure air mattress (APAM) without a turning protocol, or the control group, the Tempur-Med® mattress, plus an every 4 hour turning schedule. Heels were elevated using a standard cushion and sitting protocols were consistent between both groups.

Results

Although the number of patients developing a pressure ulcer on both the Tempur-Med® mattress and the alternating pressure air mattress were statistically equivalent, the APAM group developed more severe pressure ulcers than the Tempur-Med® group. Of those patients developing a pressure ulcer:

APAM Group:	76.5% developed a Stage II 23.5% developed a Stage III or Stage IV
Tempur-Med® Group:	94.3% of patients developed a Stage II 5.7% developed a Stage III or IV

Conclusions

Patients on the APAM developed more severe pressure ulcers, although fewer patients developed a heel ulcer. In both the APAM and Tempur-Med® groups, the heels were off-loaded by elevation, so it is likely that any heel ulcers that occurred were a result of another factor and not the surfaces themselves. Patients identified as being at risk for pressure ulcers based on the Braden Scale developed more sacral pressure ulcers on the APAM than the Tempur-Med® mattress.

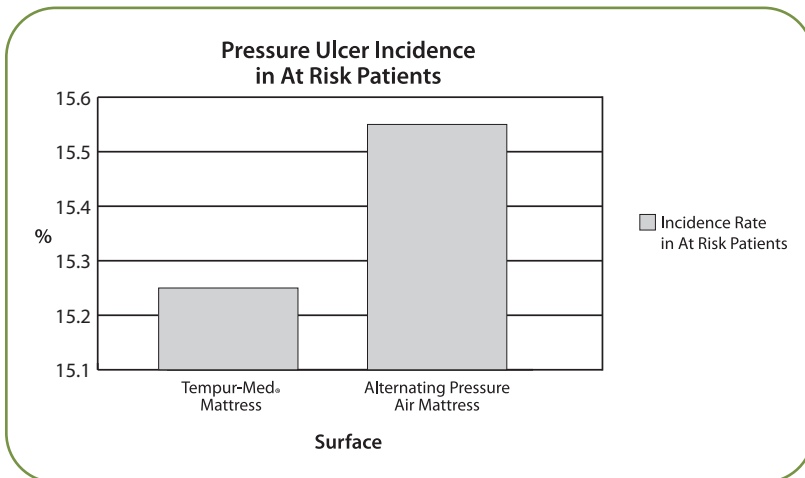
Studies were performed by Tempur-Pedic Medical.

¹ Excerpted from Vanderwee, K., Grypdonck, M., and DeFloor, T. (2005). Effectiveness of an Alternating Pressure Air Mattress for the Prevention of Pressure Ulcers, Age and Aging, 1-7.

©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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