

Comparing alternating pressure mattresses and high-specification foam mattresses to prevent pressure ulcers in high-risk patients: the PRESSURE 2 RCT

Jane Nixon,^{1*} Sarah Brown,¹ Isabelle L Smith,¹
Elizabeth McGinnis,^{1,2} Armando Vargas-Palacios,³
E Andrea Nelson,^{4,5} Julia Brown,¹ Susanne Coleman,¹
Howard Collier,¹ Catherine Fernandez,¹
Rachael Gilberts,¹ Valerie Henderson,⁶
Christopher McCabe,⁷ Delia Muir,¹
Claudia Rutherford,⁸ Nikki Stubbs,⁹ Benjamin Thorpe,¹
Klemens Wallner,¹⁰ Kay Walker,¹¹ Lyn Wilson^{1,12}
and Claire Hulme^{3,13}

¹Clinical Trials Research Unit, Leeds Institute of Clinical Trials Research, University of Leeds, Leeds, UK

²Research and Innovation, Leeds Teaching Hospitals NHS Trust, Leeds, UK

³Academic Unit of Health Economics, Leeds Institute of Health Sciences, University of Leeds, Leeds, UK

⁴School of Healthcare, University of Leeds, Leeds, UK

⁵School of Health and Life Sciences, Glasgow Caledonian University, Glasgow, UK

⁶Independent Tissue Viability Consultant, UK

⁷Institute of Health Economics, Edmonton, AB, Canada

⁸Quality of Life Office, Psycho-oncology Co-operative Research Group, The University of Sydney, Sydney, NSW, Australia

⁹Neighbourhood Team North 1, Leeds Community Healthcare NHS Trust, Leeds, UK

¹⁰Department of Emergency Medicine, University of Alberta, Edmonton, AB, Canada

¹¹Pressure Ulcer Research Service User Network, Leeds, UK

¹²Research and Innovation, Mid Yorkshire Hospitals NHS Trust, Wakefield, UK

¹³Health Economics Group, Institute of Health Research, University of Exeter Medical School, Exeter, UK

*Corresponding author J.E.Nixon@leeds.ac.uk

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Plain English summary

The PRESSURE 2 RCT

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Plain English summary

Pressure ulcers (PUs) are patches of damaged skin, mainly caused by sitting/lying in one position. PUs are graded based on how serious they are, ranging from red patches (category 1) through small skin breaks/blisters (category 2) to serious wounds (category 4).

Special mattresses are used to help prevent PUs. This study compared alternating pressure mattresses (APMs) with high-specification foam mattresses (HSFMs), to see which is better at preventing PUs.

The study included adults admitted to hospital for acute illness who were at a high risk of developing PUs. Patients were randomly allocated to HSFM or APM. Nurses checked patients' skin and recorded changes.

A total of 132 patients developed at least one new PU of category ≥ 2 before the end of treatment (60 days maximum). Of these, 53 patients were allocated to the APM arm and 79 to the HSFM arm, a difference of 2.6%. This is a small but significant difference.

Nurses looked at patients' skin again 30 days after the patient had stopped using a trial mattress. At this point, 160 patients had at least one new PU (of category ≥ 2). Of these, 70 patients were allocated to the APM arm and 90 to the HSFM arm, a very small difference of 2.0%. Some patients asked to change mattresses; this happened more in the APM group.

This study focused on high-risk patients; however, only a small number of people developed PUs, suggesting that prevention is possible with either mattress. Results also suggest that certain groups of patients may benefit more from APMs, for example people who cannot give consent or who have skin redness.

When planning prevention and choosing mattresses, professionals and patients need to consider a number of factors, such as comfort, existing PUs and people's ability to self-care. Further research is recommended to understand what sort of prevention works, for whom and in what circumstances.

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