



A Clinical Performance Review of the Harvest Balmoral Alternating Mattress system for use with the most high-risk patient group in a Care Home setting.

N Morton
Independent Nurse Advisor / Educator
RGN, BSc Hons Nursing, MSc Wound Healing and Tissue Repair, PG Cert HE

At a Glance

A post-market clinical performance review undertaken in 2022 across 11 care homes involving 82 residents, demonstrated that the Balmoral Alternating Mattress performed well and was considered clinically acceptable in the prevention, management and healing of pressure ulcers.

Figure 1

Descriptive statistics for Resident Age, Waterlow and Weight.

	Age	Waterlow	Weight
Mean	78.47	22.28	63.63
Standard Error	1.56	0.65	1.76
Median	80	21	61.65
Mode	78	21	55.1
Standard Deviation	12.82	5.76	15.60
Count	67	78	78
Largest (1)	103	42	114.7
Smallest (1)	39	7	38

Background

Harvest Healthcare supplies pressure-reducing mattresses (static and alternating) to the health and social care sector within the UK. It is therefore committed to ensuring that the equipment is subjected to post-market clinical follow-up (PMCF). Clinical Performance Reviews undertaken within the care provision sectors seek to establish how the equipment functions in the real-world setting compared to laboratory/on-site testing.

This document provides findings from performance reviews of the Balmoral Active mattress undertaken between August and December 2022 in the Care Home Sector and has been compiled by an Independent Clinical Nurse Advisor on behalf of Harvest Healthcare.

Method

A post-market clinical performance review of the Harvest Balmoral Alternating Mattress was undertaken between August and December 2022 by an Independent Clinical Advisor. A Total of 12 Independent Care Homes, which used Harvest pressure-reducing mattresses (in addition to standard pressure area care interventions including repositioning, continence care and nutritional support), were visited by the Independent Clinical Nurse Advisor. 11 of the Care Homes had a total of 82 residents who were using the Balmoral Alternating Mattress.

A review of equipment in use at each care home was undertaken. Whilst on site, the Independent Clinical Nurse Advisor was provided with anonymised clinical information for each resident to enable the collation of real-world PMCF performance data for the Harvest Balmoral Mattress.

Findings

1 Age, Waterlow Score, and Weight

Data on age was available for 67 of the residents. The average age of residents was 78 years, with the oldest resident 103 years and the youngest resident 39 years old.

Waterlow scores ranged from 7 (not at risk) to 42 (Very High Risk), with the average score being 21 (Very High Risk). For the Waterlow data set, data was available for 78 of the 82 residents included in the reviews.

Weight ranges ranged from 38kg to 114.7 kg with an average weight of 63.3kg. Those with a weight of 38kg would usually be deemed to be extremely frail, and those with a weight of > 100kg in such an elderly population are likely to have high BMI and are most likely to be overweight or obese.

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Resident Mobility and Comorbidities

The reviews undertaken by the independent clinical advisor also recorded the mobility levels and comorbidities for each resident using the Harvest Balmoral Mattress. Findings are shown in Figures 1 and 2. Figure 1 shows that 92% of residents who were nursed on the Balmoral mattress had either poor mobility (required a hoist or wheelchair, but were able to make some independent movements in bed) or were completely immobile (reliant on staff for all repositioning) with the remaining 8% able to mobilise with some assistance.

The most common comorbidities (Figure 2) for those residents who were nursed on the Balmoral mattress, included (a) a history of Cerebral Vascular Accident (CVA 20%), (b) Dementia and/or cognitive impairment (38%) and (c) Diabetes (33%).

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Development of Pressure Ulcers

In total, during the audit period, there were 8 residents who were being nursed on the Balmoral pressure mattress who had existing pressure ulcers.

One resident had developed a category 2 pressure ulcer to their elbow, but the care home staff believed that this had developed due to the resident leaning on the chair and was therefore not associated with use of the mattress.

Another resident had 2 category 2 pressure ulcers to their heels, but these had developed due to direct contact between the resident's heels and a specialist chair footplate, so again this was not deemed to be associated with use of the Harvest Balmoral mattress.

A further 5 residents with pressure ulcers; Category II (1 resident); Category III (2 residents) and Category IV (2 residents) had been admitted to the care home with pressure ulcers and were being nursed on the Harvest Balmoral mattress as part of a package of care to prevent further pressure ulcers and to expedite healing of these existing pressure ulcers.

In all of these cases, the resident's wounds were showing signs of ongoing improvement. Those with a history of pressure ulceration (3 residents) but were now ulcer-free had healed whilst using the Balmoral mattress and had remained healed and ulcer-free during their time using the mattress.

The review concluded that no new pressure ulcers developed as a direct result of using the Harvest Balmoral Mattress.

Conclusion

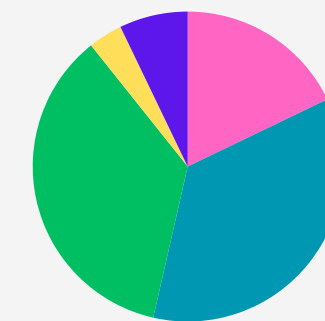
Data collected so far suggests that the Harvest Balmoral Mattress performs well for the prevention of pressure ulcers in the 24-hour care home provider environment for elderly residents (where regular repositioning and continuous support via carers is available), with low, medium or high weights, those who are at very high risk of pressure ulceration and those with comorbidities such as Diabetes, CVA and Dementia or Cognitive impairment.

It also suggests that the mattress performs well for those with pressure ulcers of Category II, III or IV and can also be used for those with a history of previous pressure ulceration to prevent further ulceration, although the numbers of residents where this was observed during the audit were small (n=3).

Harvest Healthcare aims to continue to collect this PMCF data via collaborative working with care home providers to increase the number of residents reviewed and to provide robust post-market clinical follow-up data.

Figure 2

Comorbidities.



Mobility of Resident.

