

Formal evaluation of a high specification foam mattress within a care home environment

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Introduction and Aims

Pressure ulcers are an important care quality indicator and represent one of the four initial avoidable harms identified by the department of health and monitored via the NHS safety thermometer. ¹

Data reported from a recent study identified pressure ulcer prevalence rates within nursing homes ranged from 0% to 19.6%, ² therefore this long standing issue continues to be a significant problem in primary care.

Pressure ulcer prevention is a major focus for all healthcare providers including care homes, where residents frequently present with an increased risk of pressure ulceration. Therefore, providing residents with a suitable support surface is an essential element of their care.

This evaluation reports on a new high-specification pressure redistributing foam mattress. It delivers reactive pressure area care to patients and features unique, integral air channels cut through the foam.

The mattress is designed to assist healthcare providers with pressure ulcer prevention whilst keeping residents cool and promoting comfort.

The dual aims of the evaluation were to report;

- clinical progress of residents
- user acceptance and residents' views/feedback and comfort on the mattress

Method

This evaluation took place at two care homes on the same site which are part of a national care home group comprised of 54 homes.

Following a decision by the care home manager, two POLYFLOAT Aero foam mattresses from Talley were chosen for the evaluation. Care home residents identified as up to medium risk of pressure ulcer development, with no existing pressure related tissue damage were suitable for placement onto the product.

The POLYFLOAT Aero mattress (see Figure 1) provides reactive therapy and consists of castellated foam (see Figure 2), allowing partial immersion and envelopment of the patient. The unique, integral air channels (see Figure 3) assist with mattress profiling and patient comfort.

Resident demographics including age, sex, risk level, mobility and skin/tissue status were reported during the course of the evaluation.

Polyfloat™
Aero



FIGURE 1.
POLYFLOAT Aero
mattress

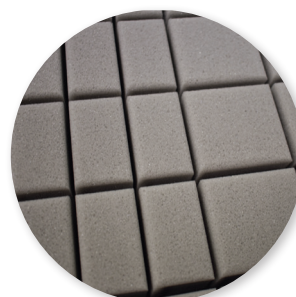


FIGURE 2.
Foam castellations



FIGURE 3.
Unique Aero channel design

User acceptance and residents' views were captured using structured questionnaires which were completed at the end of the evaluation period.

Results

Nine residents (4 female; 5 male) completed the mattress evaluation. Residents' mean age was 84 years (range 81 to 90 years).

The Braden risk assessment tool was used to determine residents' pressure ulcer risk level and Braden scores ranged from 15 – 23 (low risk).

None of the residents developed pressure related skin damage during the evaluation. Mean duration of time spent on the mattress was 8 days.

Sixteen staff provided feedback, as summarised in Table 1.

Staff reported that the mattress was effective at pressure redistribution and maintaining skin integrity, along with the ability to conform to the resident's position whilst profiled. The mattress also prevented residents becoming overly warm, thereby assisting with their comfort.

In addition to the staff feedback, residents also reported that they were comfortable, identifying that the mattress prevented them becoming overly warm/hot and stating they would be happy to use this mattress again.

FEEDBACK	PERCENTAGE OF STAFF
The mattress was "effective / very effective" at redistributing pressure and maintaining skin integrity	100%
The mattress was "comfortable / very comfortable" for residents	100%
The ability of the mattress to conform to the resident's position whilst profiled was rated as "good / very good"	94%
Ability of the mattress to prevent residents getting overly warm/hot when in bed was rated as "good / very good"	69%

TABLE 1. Staff views on the Talley POLYFLOAT Aero foam mattress support surface

Discussion/Conclusion

Patient comfort and pressure ulcer prevention are key considerations for all healthcare providers. When using foam mattresses, it is not uncommon to hear of residents' comfort being compromised because they feel 'too hot' on the mattress. This new high specification foam mattress design may be one way to combine effective pressure redistribution with comfort by helping to prevent patients feeling too warm.

With a clear focus for healthcare providers to prevent avoidable harms, the importance of residents remaining free from pressure related skin damage is essential. In this evaluation the use of the POLYFLOAT Aero foam mattress within a care home setting has been a valuable tool in achieving this.

References

1. Department of Health (2012) Delivering the NHS Safety Thermometer CQUIN 2012/13
2. Courvoisier DL, Righi L, Bene N, Rae Anne-Claire and Chopard P (2018) Variation on pressure ulcer prevalence and prevention in nursing homes: A multicentre study. Applied Nursing Research; 42:45-50.