

# Selecting heel-offloading devices: a clinical evaluation

Clinical standardisation is important when managing conditions such as pressure ulcers in care home groups. Julia Atherton and Ross Joannides describe how they organised an evaluation to select a heel-offloading device to be used across their homes

**W**ithout question, care delivered in all settings should be evidence-based and comply with national and international guidelines. Care home staff and managers have a responsibility to ensure this is the case in their setting and to provide assurance to the quality and safety committee of the organisation.

## Pressure ulcer prevention

This article describes how Barchester Healthcare identified that its pressure ulcer prevention and management strategies permitted each home to use multiple products, without any clinical standardisation. A blind clinical evaluation, involving 50 residents, was undertaken over a 2-month period in four care homes. This resulted in the selection of a single supplier for all of its heel-offloading devices, which enabled the implementation of a centralised approach to the prevention and management of heel pressure ulcers within the group. The single supplier chosen not only met clinical requirements, but could also offer ongoing clinical expert support and education for care staff, as well as provide logistical benefits.

## Staff setup

Barchester Healthcare runs 200 nursing and residential care homes in England, Scotland, Wales and Jersey, with just over 11 000 beds in total. In the residential homes, care is planned and provided by senior carers,

with support from district nurses (DNs) and community teams. In the nursing homes, care is planned and delivered by qualified nurses and care practitioners, who are trained to level 3 VQ (vocational qualification) and undertake an 18-month internal training programme to develop their clinical skills and competencies. The company also employs a clinical development nurse (CDN) in each of its 17 regions, who provides clinical support, education and guidance to the homes. Tissue viability support and guidance are also available from some local clinical commissioning groups (CCGs), but this varies between locations.

## Tissue viability training

Before September 2016, training on tissue viability was provided to staff in the care homes in the form of the Movement, Ill, Sore, Keep moving, Incontinence, Nutrition (MI SKIN) tool. Barchester Healthcare personalised this following its involvement in the Surface, Skin inspection, Keep moving, Incontinence/moisture, Nutrition/hydration (SSKIN) project in 2015, which aimed to promote awareness about the skin changes associated with pressure damage. CDNs provided the training to care home staff.

## Data collection

There were no group-wide protocols or procurement processes on the selection and ordering of heel-offloading devices. Instead, these decisions were made at a local level, resulting in wide variations in equipment usage, clinical outcomes and spend.

A centralised database generated incidence and prevalence data for the group as a whole. Prevalence data was reviewed monthly by the CDN. Data collected comprised:

- Pressure ulcers (categories II–IV)
- Wound location
- Whether or not the resident had been admitted with the pressure ulcer
- Monthly updates on progress and/or deterioration.

Prevalence data was not collected on moisture lesions, or suspected deep tissue injury, meaning that the database

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did not fully reflect the latest guidelines of the European Pressure Ulcer Advisory Panel (EPUAP), the National Pressure Ulcer Advisory Panel (NPUAP) and the Pan Pacific Pressure Injury Alliance (PPPIA) (EPUAP, NPUAP AND PPPIA, 2014).

### Selecting heel-offloading devices

The director of nursing reviewed the use of offloading equipment for heels throughout the company and identified that there were inconsistencies in the use of these devices, as well as a lack of product knowledge among staff.

Following the review, four suppliers of heel-offloading boots were invited to take part in a clinical evaluation designed to determine a single supplier of these devices for Barchester Healthcare.

Two suppliers were eliminated from the first round of the evaluation, due to infection-control issues and lack of clinical evidence. Products needed to be reusable and cleanable. One of the suppliers' devices could not be cleaned effectively, and so was removed from the evaluation. The other supplier was eliminated because it was felt that the size and positioning of the inspection gate on its product was insufficient.

The two remaining companies were asked to complete the clinical evaluation within the Barchester group. Each company was allocated two homes, where the care team evaluated their products for 2 months on residents

identified as being at risk of pressure ulceration on the heel, based on their Waterlow score.

### Evaluating products

Before the evaluation started, the supplier presented the clinical products to the care team and demonstrated how they should be used in clinical practice under the supervision of the director of nursing and tissue viability nurse consultant.

At the start of the evaluation, staff at each home were asked to record the following baseline data:

- Type of support surface being used by the resident
- The resident's risk status, as determined by their Waterlow score (Waterlow, 2007) and malnutrition universal screening tool (MUST)
- The pressure ulcer prevention strategies in place as directed by Barchester's tissue viability policy
- The resident's level of mobility, including whether they were continually moving around the bed
- The appearance of the skin on the heel area (normal intact skin; recently healed pressure ulcer; blanching erythema; non-blanching erythema; broken skin but not ulcerated; or category I pressure ulcer).

### Reporting back

At the end of the 2-month audit, the home staff reported the appearance of the skin on the heel, using the same parameters as at baseline, so this could be compared.



Nurses, care practitioners and senior carers are provided with pressure-ulcer management training

They were also asked if there were any improvements or deteriorations in the condition of the heel and the surrounding skin during the audit follow-up period, or if they had remained unchanged. If there were any changes, they were asked to state if offloading was still required and, if so, to specify the resident's Waterlow and MUST scores.

Staff were also asked to rate the offloading device on a four-point scale (where 1 means poor and 4 means excellent) in terms of its ease of use; hygiene; ease of skin inspection; comfort (day and night); and its overall performance. Finally, they reported whether or not the offloading device fitted the resident.

The home staff were unaware that this was a comparative audit. As stated above, 50 residents participated in the audit across four sites. Each site then forwarded the completed data-collection forms to Barchester's head office, where they were reviewed by the director of nursing and tissue viability nurse consultant. All the data forms were then issued to both suppliers, with any data that made them identifiable hidden, as they had to present back the cumulative findings on all of the collected data. The data collected were verified and analysed before they were issued to the suppliers. Each supplier was then invited to present the findings, asking them to report back as supplier A and B.

### Choosing a provider

Frontier Medical's Repose Foot Protector and Foot Protector Plus performed well in all of the parameters measured in the evaluation. Additionally, as a company, Frontier Medical was able to support Barchester with extra services when compared with the competitor. On this basis, it was decided to grant Frontier Medical preferred provider status. The extra services comprised:

- Tissue viability training support across the extensive geographical spread of the homes
- Recognised clinical expertise to help deliver training
- A new size of its heel-offloading device, which was developed in response to anthropometric data compiled by Barchester.

The issue around sizing arose when it was observed that neither company's standard-length heel boots reflected the anthropometric sizes of Barchester residents' lower limbs. As part of the evaluation, anthropometric measurements had been undertaken on numerous residents, and these identified the requirements for a new size of offloading device. Working in collaboration with Frontier, a bespoke size was developed that met the needs of the resident profile identified in this way.

The tender was granted to Frontier in November 2018. At the time of writing (January 2019), a protocol on the assessment and management of heel pressure ulcers is being introduced through the updated tissue viability policy, and the first Frontier offloading devices



*Getting sizing right is key in pressure-offloading devices*

have been purchased.

Training on heel ulcer care and how to use the Frontier equipment has been provided to staff by the CDNs, who were themselves trained by Frontier and Renray Healthcare clinicians. Renray Healthcare are the sole supplier of pressure area care and profiling beds to the Barchester group. As this process has not been fully implemented yet, it is too soon to collect any data on quality outcomes.

### Conclusion

This article shows how a fragmented approach in the selection of heel-offloading equipment in the Barchester healthcare nursing and care homes was replaced to ensure the standardised delivery of evidence-based practice. Repose boots were placed on Barchester's internal supplier catalogue, as a single provider for the group as a whole. The process has enabled the development of a clinically effective and cost-efficient product into the care home group that meets the needs of the care home residents.

The new size of the heel-offloading devices appears to be more comfortable for residents and have improved clinical outcomes. As the new system has only just been implemented throughout the homes, the benefits for both staff and residents are still being monitored; a full review will be carried out in July 2019.

The CDNs were provided with PowerPoint presentations, which enabled them to deliver the new training programme. This had a greater focus on the identification and management of risk, including the selection of pressure-redistributing equipment. The CDNs

### Key points

- A centralised approach to pressure ulcer prevention is key in groups of homes that are spread out geographically
- Awareness of pressure damage among care staff can be promoted by tools such as MI SKIN (Movement, Ill, Sore, Keep moving, Incontinence, Nutrition) and SSKIN (Surface, Skin inspection, Keep moving, Incontinence/moisture, Nutrition/hydration)
- Barchester Healthcare selected a heel-offloading device by organising a clinical evaluation of two providers
- The products were evaluated on the basis that they had to be reusable and easy to clean
- A provider was selected on the basis that it could offer bespoke sizing and tissue viability training across all homes

were responsible for delivering the new classroom-based programme to nurses, care practitioners and senior carers in their region. **NRC**

### References

- European Pressure Advisory Panel (EPUAP), National Pressure Ulcer Advisory Panel (NPUAP) and Pan Pacific Pressure Injury Alliance (PPPIA). Prevention and treatment of pressure ulcers: quick reference guide. 2014. <https://tinyurl.com/y9ow6uce> (accessed 9 April 2019)
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### CPD reflective questions

- What do you think to be the most important features of any pressure-offloading device?
- Do you feel you have received sufficient training on pressure ulcer prevention? How can training be improved?
- In your workplace, which members of staff are involved in decisions about equipment purchases?
- Is there a standardised approach to pressure ulcer prevention in your place of work?