

Wound care - Foam dressings

In England and Wales, over £19.6 million is spent annually on foam dressings (ePACT August to October 2015). QIPP projects in this area are aimed at ensuring foam dressings are prescribed appropriately, ensuring that they are used optimally, and at choosing suitable products with lower acquisition costs. This bulletin reviews the place in therapy of foam dressings and offers guidance for organisations considering reviewing foam dressing prescribing as a QIPP project.

This bulletin does not cover foam dressings containing silver which are addressed in bulletin B53 on silver dressings <http://www.prescqipp.info/silver-dressings/viewcategory/212>, or soft polymer/foam combination dressings which are included in bulletin B128 on soft polymer dressings, <https://www.prescqipp.info/resources/viewcategory/450-wound-care-soft-polymer-dressings>

Recommendations

- Foam dressings are suitable for a wide range of wound types; it is reasonable to include more than one product in local formularies.¹
- Involve appropriate stakeholders, such as tissue viability nurses and community nurses, in the formulary decision making process for their clinical expertise and to support whole system compliance.
- Optimise wear time by ensuring the dressing's absorbency is well matched to the needs of the wound.
- Use simple low-adherence dressings under compression for venous ulcers, in line with SIGN guidance, unless there is reason to prefer an alternative.² If exudate is an issue, dressings such as foams, alginates or hydrocolloids may have advantages.³
- Choose the smallest size dressing that is appropriate to the wound (allowing for any necessary overlap onto healthy skin), as the dressing prices can rise significantly with increasing size.
- Prescribe the minimum quantity of dressings necessary to meet people's needs, to help minimise wastage and stockpiling.⁴ Prescribe the exact number of dressing rather than 'original packs'.
- Do not prescribe dressings as repeat prescriptions unless there is a clear long term need for the same dressing.

Key action points

Review all repeat prescribing of foam dressings and prescribe them as acute issues unless there is a legitimate reason to continue repeat prescribing.

Ensure GP practices have a process in place for identifying and investigating prescriptions for non-formulary dressings or large quantities of dressings (such as quantities over ten dressings per month). Where prescribing of large quantities of foam dressings is identified, ensure that:

- A foam dressing is the most appropriate dressing type for the person's needs.
- The correct absorbency, size and type of foam dressing has been selected.
- The dressing is not being changed more frequently than clinically indicated.
- The minimum quantity of dressings necessary to meet the person's needs is ordered.

- The process of identifying potential issues and establishing the necessary information may require input from a range of staff such as GPs, receptionists, pharmacists, practice nurses and district nurses. Appropriate specialist advice e.g. from a tissue viability nurse, should be sought if needed.

Background

Wound healing is thought to be facilitated by a moist environment, which encourages cell migration and allows the diffusion of growth factors and enzymes. Excessive moisture, however, can lead to maceration of the surrounding skin and can encourage bacterial and fungal infections, which can delay healing and lead to further tissue breakdown.⁵ Many modern wound dressings aim to manage moisture levels in wounds either by maintaining or donating moisture or by absorbing exudate. It should be noted that there are situations where moist wound healing is considered inappropriate, e.g. gangrenous toes associated with vascular disease.⁶

Foam dressings normally contain hydrophilic polyurethane foam and are designed to absorb wound exudate and maintain a moist wound surface,⁷ as well as provide thermal insulation.⁵ They are non-adherent and do not shed fibres into the wound. There are various versions, such as sheet form (with or without adhesive and/or plastic film-backing) or cavity dressings. The film backing acts as a barrier to bacteria but allows the transfer of water vapour.⁵

Some foam dressings include additional absorbent materials, such as viscose and acrylate fibres, and some incorporate a silicone contact layer for non-traumatic removal.⁷ The BNF classification, which groups dressings according to their primary components, is followed here. Dressings combining foam with a specialised contact layer such as silicone are generally listed in the BNF under the soft polymer section (A5.2.3), although some are included under foams (A5.2.5).

Types of foam dressings

The BNF divides foam dressings into three types according to their ability to manage exudate:

For lightly exuding wounds

There are just two products in this category, both of which are polyurethane foam film dressings with an adhesive border.

For lightly to moderately exuding wounds

The main distinction between the products in this section is the presence or absence of an adhesive border on the polyurethane foam film dressings. Some products are shaped for use on particular anatomical areas (e.g. sacrum, heel, finger/toe).

For moderately to heavily exuding wounds

This is by far the largest group of foam dressings and as well as containing the different varieties of sheet foam dressings described above this group also includes some cavity dressings. Cavity dressings are available in various shapes and sizes, plus a conforming cavity wound dressing is available (Cavi-Care®), consisting of a two part liquid which is mixed and then poured into the wound cavity where it expands to fill the space with a soft foam.⁸ There is also a sheet foam dressing impregnated with ibuprofen, aimed at reducing wound pain (Biatain® -Ibu).⁹

National guidance

NICE has published guidelines on the prevention and management of foot problems in type 2 diabetes, pressure ulcers, surgical site infection and inpatient management of diabetic foot problems. Although these guidelines give important recommendations about wound care, they do not make recommendations on specific products.⁴

NICE recommend that dressing selection should be made after careful clinical assessment of the person's wound, their clinical condition, and their personal experience and preferences. In the absence of any

robust clinical evidence to guide choice, NICE recommend that prescribers should routinely choose the dressing with the lowest acquisition cost and the performance characteristics appropriate for the wound and its stage of healing. They also recommend prescribing the minimum quantity sufficient to meet the person's needs, and avoiding routinely choosing antimicrobial dressings ahead of non-medicated dressings.⁴

For treating pressure ulcers NICE advocate the use of dressings that promote a warm, moist wound healing environment, and advise against the use of gauze. Pain and tolerance, position of the ulcer, amount of exudate and the frequency of dressing change should be considered.¹⁰ A recent guideline from the American College of Physicians on the treatment of pressure ulcers recommends hydrocolloid or foam dressings to reduce wound size, but they grade this as a weak recommendation based on low-quality evidence.¹¹

SIGN guidance on the treatment of chronic venous leg ulcers recommends the use of simple non-adherent dressings,² based on the findings of a Cochrane review (see venous leg ulcers below).¹²

Clinical effectiveness

General evidence base

A recent publication from NICE highlighted some of the challenges faced when selecting dressings. The relative lack of robust clinical or cost-effectiveness evidence in this area is acknowledged, as is the uncertainty of how laboratory characterisation tests relate to performance in real life.⁴

This lack of robust, clinically meaningful data on this subject was highlighted in a 2010 article by the National Prescribing Centre on advanced wound dressings for chronic wounds, which concluded that there is insufficient high-quality evidence to distinguish between any of the advanced wound dressings used in the management of chronic wounds. Furthermore, unless the use of a specific dressing can be adequately justified on clinical grounds it would seem appropriate for NHS health professionals to routinely choose the least costly dressing that meets the required characteristics and is appropriate for the type of wound and its stage of healing.¹³

Pressure ulcers

A 2013 Cochrane review looked at dressings for **preventing** pressure ulcers. It included four trials (three of which studied foam dressings with or without a silicone contact layer) with a total of 561 participants and showed that dressings applied over bony prominences reduced pressure ulcer incidence; RR 0.21 (95% CI 0.09 to 0.51; P value 0.0006). However, the authors reported that the conclusion was compromised by the low quality of the included trials, all of which were of high or unclear risk of bias, and stated that the results should be interpreted as inconclusive.¹⁴

When reviewing the evidence for dressings in **treating** pressure ulcers, NICE considered data from 62 clinical trials, covering a wide range of dressing types (including foam), which were compared to each other or to placebo. The guideline development group did not feel that the available evidence or its quality allowed for a recommendation to be made about the use of a specific type of dressing and they emphasised the importance of considering the function of the dressing and specific patient factors. They did however recommend against the use of gauze for treating pressure ulcers on the basis that there was little clinical benefit and that important adverse events, such as increased pain at dressing removal, skin irritation and discomfort, were possible.¹⁵

Venous leg ulcers

SIGN recommend the use of simple non-adherent dressings in the management of venous leg ulcers.² This is based on a 2006 Cochrane review¹² of 42 studies where non-adherent dressings were compared to alginate dressings (60 patients), hydrocolloids (792 patients), hydrogels (151 patients), and foams (253 patients). No evidence was identified to support superiority of any dressing type over another when applied under appropriate multilayer bandaging. No evidence was identified on the effectiveness of different dressings in patients unable to tolerate multilayer bandaging.

The Cochrane review referred to by SIGN has now been superseded by one looking specifically at foam dressings for venous leg ulcers. This review also concluded that current evidence (of low quality) does not suggest that foam dressings are more effective in the healing of venous leg ulcers than other wound dressing treatments, but that further evidence is needed before any firm conclusions can be made.¹⁶

A Cochrane review on topical agents or dressings for pain management in venous leg ulcers is also available. It included two trials (470 participants with venous leg ulcers) that evaluated ibuprofen slow-release foam dressings for persistent venous leg ulcer pain. Compared with local best practice, significantly more participants in the ibuprofen dressing group achieved the outcome of >50% of the total maximum pain relief score between day 1 and day 5 (RR 1.63, 95% CI 1.24 to 2.15, NNT=6). In the second trial, compared with an identical non-ibuprofen foam dressing, there was no statistically significant difference in the proportion of participants experiencing slight to complete pain relief on the first evening of treatment. The reviewers concluded that there is some evidence to suggest that ibuprofen dressings may offer pain relief to people with painful venous leg ulcers but further research should consider standardised pain assessment methods and assess effect on ulcer healing and impact of long-term use.¹⁷

Diabetic foot ulcers

A Cochrane review which included six studies (157 participants) reported on the use of foam dressings in healing of diabetic foot ulcers. Meta analysis of two studies indicated that foam dressings do not promote healing compared with basic wound contact dressings (RR 2.03, 95%CI 0.91 to 4.55). Nor was a statistically significant difference observed in the number of diabetic foot ulcers healed when foam dressings were compared with either alginate or hydrocolloid (matrix) dressings. All included studies were small and/or had limited follow-up times.⁷

Prescribing points

- Foam dressings are suitable for all types of exuding wounds, but not for dry wounds.⁶
- Appropriate wear time will depend on a number of factors including level of exudate, absorbency of the product and site of the wound, and the decision as to when to change a dressing should be based on clinical assessment. Wear time can be optimised by ensuring the dressing's absorbency is well matched to the needs of the wound.
- There is no conclusive evidence that foam dressings used over bony prominences reduce pressure ulcer incidence.¹⁴ They should not be used in place of any appropriate pressure-relieving products.¹⁸
- There is some evidence that a foam dressing that releases ibuprofen may offer pain relief in venous leg ulcers, but the evidence is limited. The release of ibuprofen from the dressing is dependent on the presence of exudate.¹⁷ Cautions and contraindications for ibuprofen should be taken into consideration when prescribing them.⁶ If they are used, a reasonable approach may be to initiate them as a trial and switch to a non-medicated dressing if the patient does not perceive a benefit after a set time period e.g. 1 week.
- Where dressings are required to fit the heel, consider whether a good as or better fit can be achieved by cutting a suitable dressing to size rather than using a specifically shaped product, as this may also be more economical, e.g. Allevyn heel £5.08 (10.5cm x 13.5cm) is relatively expensive; consider cutting standard Allevyn dressing £2.48 (10x10cm) or £3.99 (10cm x 20cm) to suit, as heel sizes vary.¹
- Dressing price can rise significantly with increasing size, so the smallest size dressing that is appropriate to the wound (allowing for any necessary overlap onto healthy skin) should be selected.
- Wounds change in size and nature over time, so the suitability of different dressings is also likely to change. To help avoid wastage and stockpiling, the minimum quantity of dressings necessary to meet people's needs should be prescribed.⁴
- The changing nature of wounds and need for regular reassessment means it is often inappropriate to prescribe dressings on repeat prescriptions.

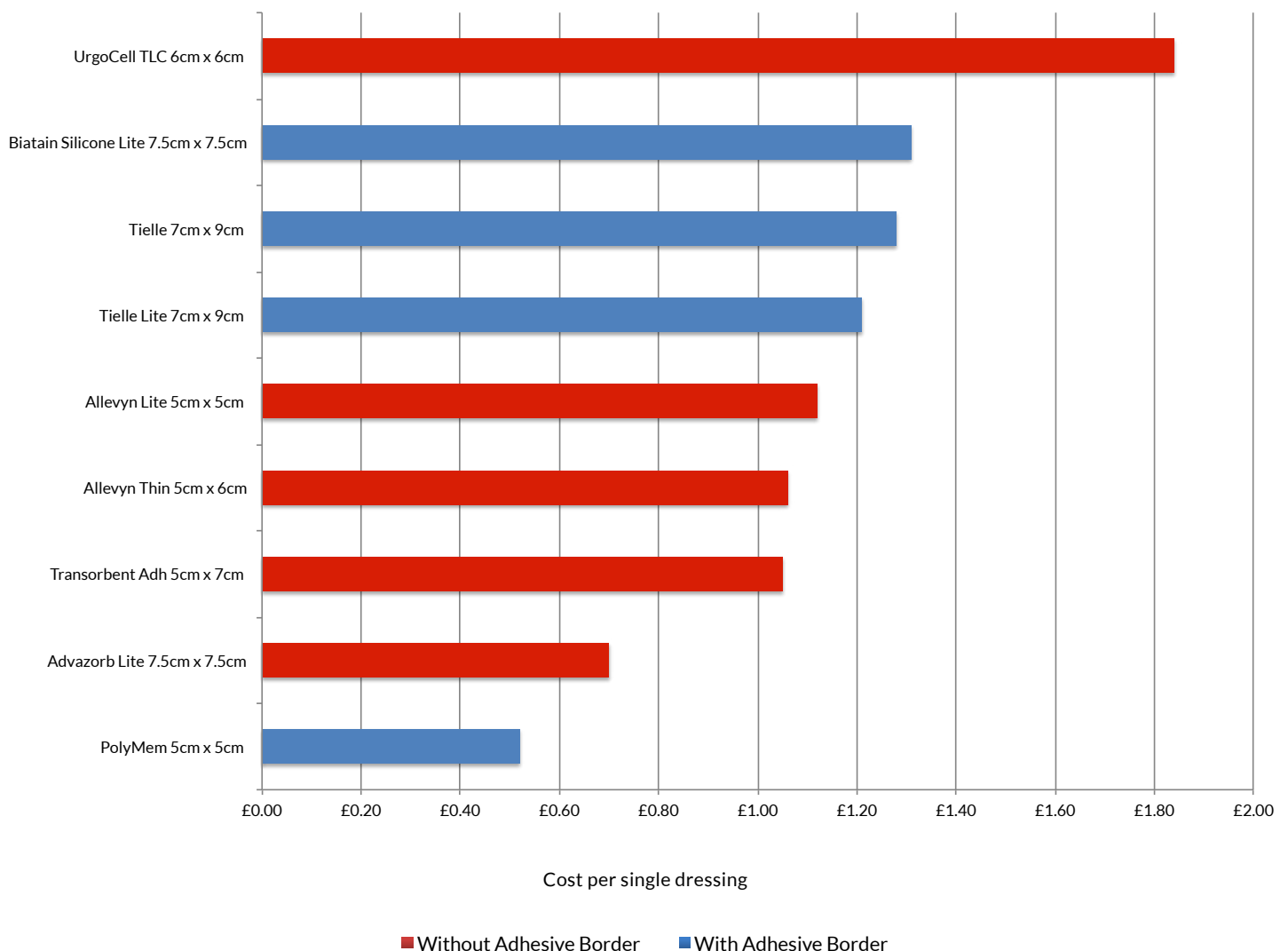
Costs

Many localities have developed their own wound care product formularies to provide guidance on choice and use of wound care products. A best practice statement from Wounds UK advises that formularies should be developed by multidisciplinary teams using a fair and impartial process, avoiding the undue influence of the manufacturers. They should include a range of products to serve the range of wound types and stages of healing. In the absence of clinical and cost-effectiveness data to distinguish between dressings of similar type, and in the absence of other clinically important differences, cost is an appropriate deciding factor in dressing choice.¹⁹

The following charts can support formulary development and review by providing cost information for the different BNF categories of foam dressings, and are intended for use in conjunction with the advice of a local specialist (e.g. tissue viability nurse).

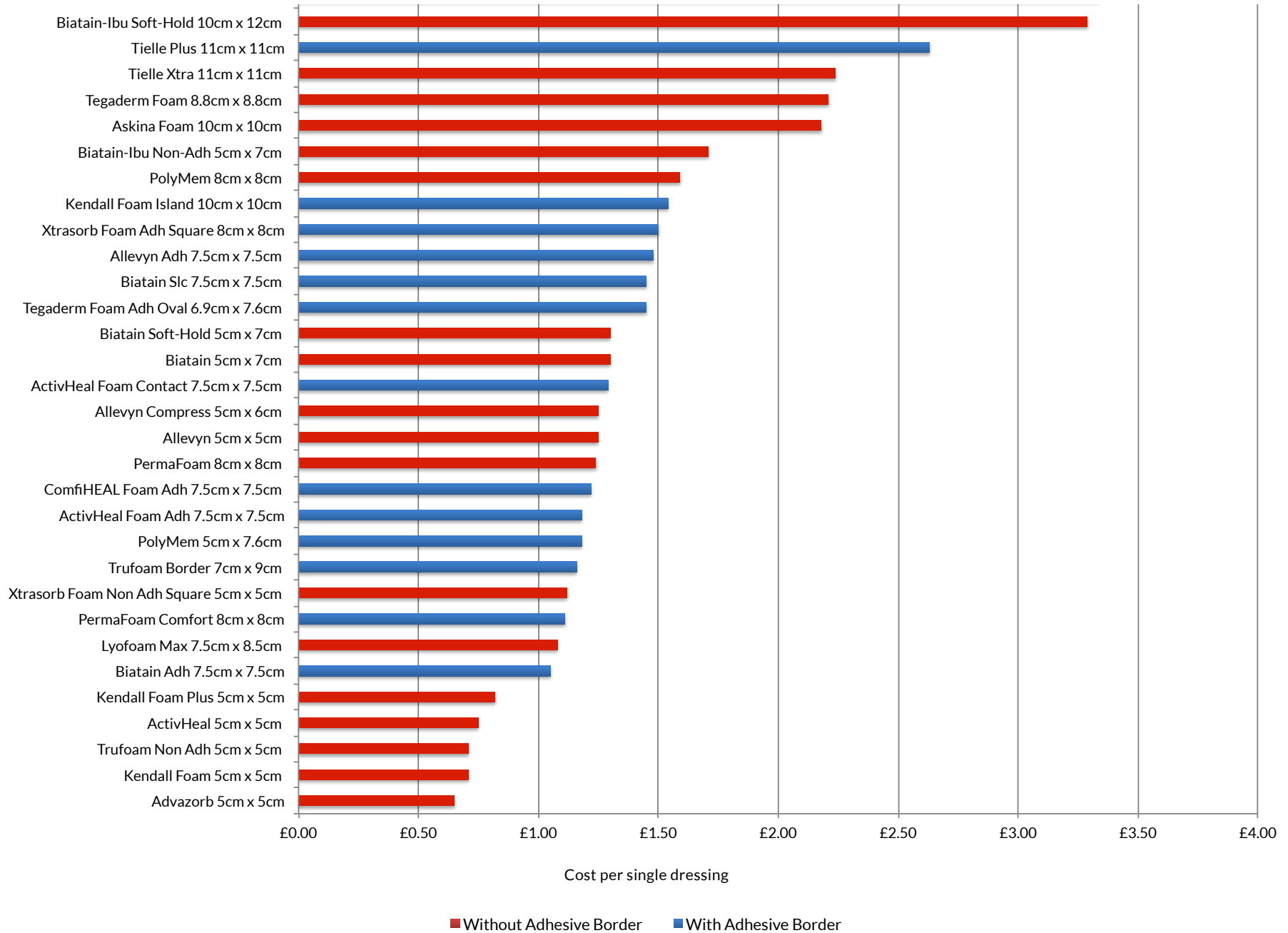
Costs displayed are for one dressing in the smallest size. Shaped products for specific anatomical areas (e.g. heel, sacrum) and cavity dressings are not included.

Figure 1. Foam dressings for lightly or lightly to moderately exuding wounds



B127. Foam dressings 2.1

Figure 2. Foam dressings for moderately to heavily exuding wounds



Savings

In England and Wales, over £19.6 million is spent annually on foam dressings (ePACT August to October 2015). Many foam dressings have a relatively long maximum wear time (e.g. up to seven days for some products), however a significant proportion of prescriptions are for more than ten items. Although wear time will be highly dependent on other factors, such as level of exudate, it seems likely that savings could be achieved by ensuring foam dressings are not changed more frequently than clinically necessary, by ensuring a product of the correct absorbency is selected, and by reducing the amount supplied to the minimum that meets the patient's needs.

Savings may also be achieved by selecting the least costly dressing option that is suitable for the patient and their wound. Local wound formularies can support this.

Data on spend for dressings supplied through direct procurement are not readily available so cannot be included in the potential savings figures.

Table 1. Potential cost savings for foam dressings supplied via FP10 (ePACT August to October 2015)

Average percentage prescriptions for more than ten foam dressings	32% (England data only)
Annual savings if 50th percentile of cost reached by all currently above it	£3,755,441 (England data only)
Annual savings if 10th percentile of cost reached by all currently above it	£12,751,900 (England data only)
Annual savings for a 20% reduction in prescribing	£3,922,755 (England and Wales)

Summary

Foam dressings come in an assortment of absorbencies and types and are useful in managing a broad range of exuding wounds. Product selection should focus on providing a dressing with the optimal characteristics for the patient and their wound, whilst avoiding paying a premium for features that do not enhance the individual's care e.g. use of an excessively large dressing or use of an ibuprofen-containing dressing where it is having no perceivable impact on pain. As with all dressing prescribing, steps should be taken to prevent avoidable waste, including over-ordering, stockpiling and changing dressings more frequently than clinically necessary.

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Additional PrescQIPP resources



Briefing



Data pack



Implementation resources

Available here: <https://www.prescqipp.info/resources/viewcategory/449-wound-care-foam-dressings>

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