

## Wound care: Surgical adhesive tapes

In England and Wales over £1.5 million is spent annually on surgical adhesive tapes (ePACT Jan - Mar 2016). Projects in this area are aimed at choosing products with appropriate characteristics for the intended use, which have lower acquisition costs. This bulletin reviews the place in therapy of surgical adhesive tapes. It offers guidance for organisations considering reviewing their prescribing.

Bulletins on a range of other wound care products including silver dressings, other antimicrobial dressings, sterile dressing packs, protease-matrix modulating dressings, foam dressings, soft polymer dressings and negative pressure wound therapy are also available at <https://www.prescqipp.info/wound-care/projects/wound-care-webkit>

### Recommendations

- A wide range of surgical adhesive tapes with varying properties are available. Consider characteristics such as the tape's permeability, conformability, stretch, level of adhesion and cost when selecting a product. This is alongside individual factors, such as intended use and the vulnerability of the person's skin.
- Where dressings are being secured together without skin contact, choose the least costly product that secures the dressing sufficiently.
- Soft silicone tapes have been developed to reduce trauma on tape removal. These may be preferred for fragile skin. They are the most costly option and should only be selected where other products are unsuitable. Seek advice from a tissue viability specialist if necessary.
- For all tape types, price increases as the width of the tape increases; therefore choose the narrowest tape that is suitable for the application.
- Involve appropriate stakeholders, such as tissue viability nurses (TVNs) and community nurses, in the formulary decision making process for their clinical expertise and to support whole system compliance.
- GP practices should have a process in place for identifying and investigating:
  - » Prescriptions for non-formulary items.
  - » Large quantities of surgical adhesive tapes (and other dressings).

### Background

Surgical adhesive tapes are used for securing dressings or tubing, such as intravenous lines or urinary catheters.<sup>1</sup> Different materials and adhesives are used to make a variety of products with differing properties, such as their permeability, conformability, stretch and adhesion. The adhesives used, particularly those containing rubber, can cause irritant and allergic reactions. Synthetic adhesives have been developed to overcome this problem, but they too can be associated with reactions. Care is needed not to apply these tapes under tension, to avoid creating a tourniquet effect.<sup>2</sup>

The BNF subdivides surgical adhesive tapes into those that are either occlusive or permeable. The Drug Tariff classifies them into more specific categories (see below).<sup>3</sup> However, even within these categories, the properties of products can vary and they are not necessarily interchangeable.

The main categories of surgical adhesive tapes listed in the Drug Tariff are:

- **Impermeable plastic adhesive tapes**  
These tapes are occlusive and can be used to cover sites where total exclusion of water and water vapour is required.<sup>1</sup> They can also have specialist uses, such as in dermatological patch testing.<sup>4</sup> Occlusive tapes can cause maceration (softening and breaking down) of the skin.<sup>2</sup>
- **Permeable, non-woven synthetic adhesive tape**  
This is the largest and most frequently prescribed group of surgical adhesive tapes (ePACT December 2015). They are generally paper based or made from a non-woven textile, but the Drug Tariff does list at least one made from plastic. They can be further subdivided by whether or not they are apertured.<sup>3</sup> The apertured structure of some of the fabric type products (e.g. Mefix®) can allow greater extensibility.<sup>5</sup>
- **Soft silicone fixation tape**  
This newer category of permeable surgical tapes has been developed to reduce trauma on removal, and may be preferred for fragile skin.<sup>6</sup> They can be repositioned without losing their adhesive properties. Their adhesion with the skin does not increase over time, as can be the case with some other adhesives.<sup>7</sup>
- **Elastic adhesive tape and zinc oxide adhesive tape**  
Other types of surgical tape consist of woven backing fabric with adhesives such as zinc oxide. Extensible types (elastic surgical adhesive tape) and non-extensible types (zinc oxide surgical adhesive tape) are available.<sup>1</sup>

### Choosing surgical adhesive tape

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.<sup>8</sup>

The choice of surgical adhesive tape will depend on the requirements for use and the type of skin surface to which it will be applied.<sup>1</sup> Consider characteristics such as the tape's permeability, conformability, stretch, level of adhesion. Other features such as whether the tape can be torn may be a factor in ease of use.

When considering the adhesion of the product, assess dressing security and ease of removal (unless the tape is securing dressings together without skin contact). Keep in mind that there is a biological variation in the levels of adhesion of the same product to normal skin of different people. This is because adhesion is affected by factors such as sebum levels, dryness, sweating, hair and the presence of residues of any creams and ointments.<sup>7</sup>

Consider factors that may increase the vulnerability of the individual's skin, including:

- Increasing age.
- Skin diseases such as eczema.
- Issues that relate to the underlying pathology of certain wound types, e.g. venous leg ulcers, where periwound skin is thin and easily damaged by adhesives, and at risk of allergic or irritant reactions.<sup>9</sup>

### 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 multidisciplinary teams should develop formularies 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.<sup>10</sup>

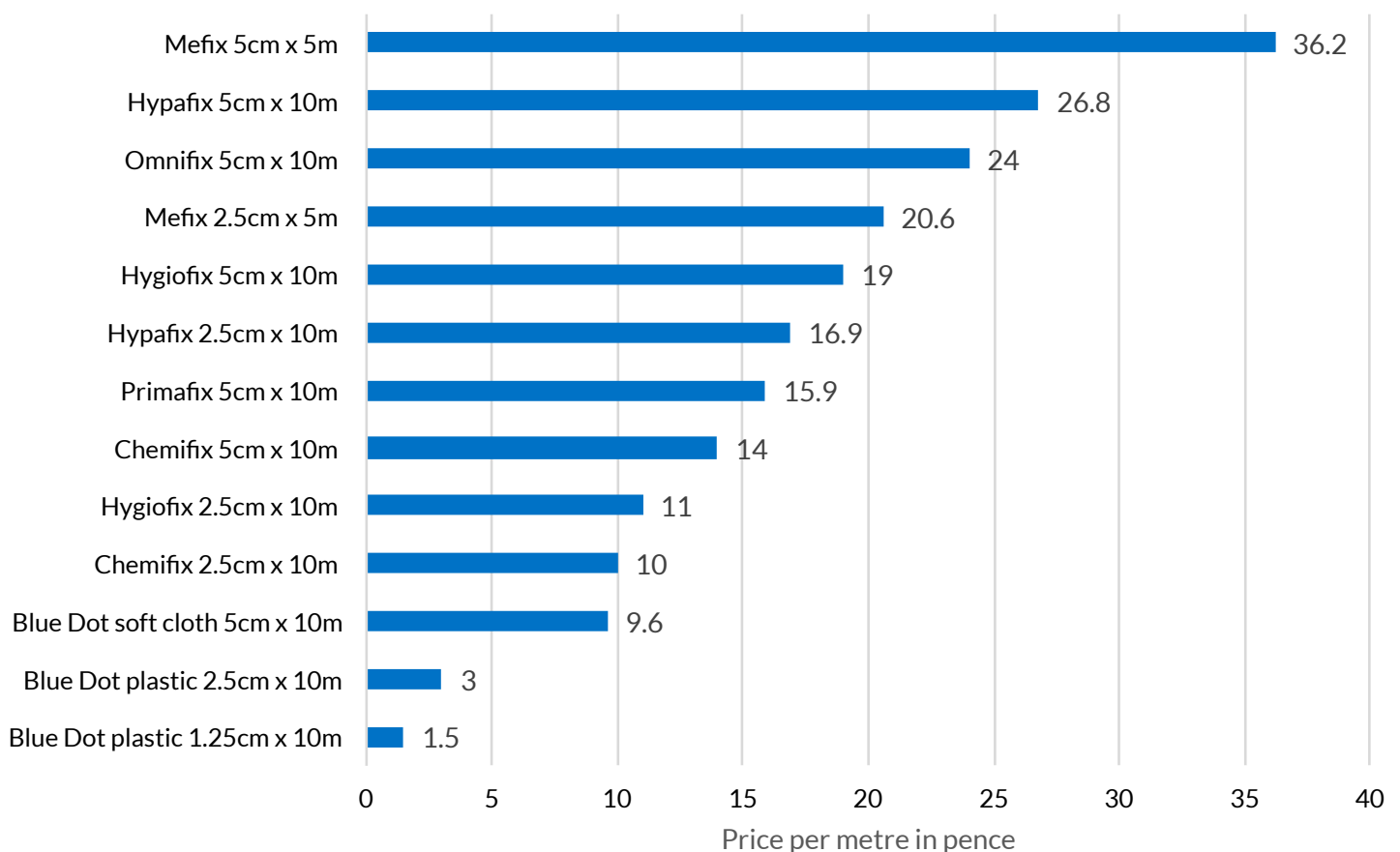
The following information can support formulary development and review by providing cost information for the different types of surgical tapes. It is intended for use in conjunction with the advice of a local specialist (e.g. TVN). The properties of products within each category can vary and they are not necessarily interchangeable.

The cost tables below focus on the larger categories of surgical adhesive tapes, which account for the majority of prescribing in this area. Pricing information for products not included (impermeable tapes, elastic adhesive tapes and zinc oxide tapes) can be found in the Drug Tariff.

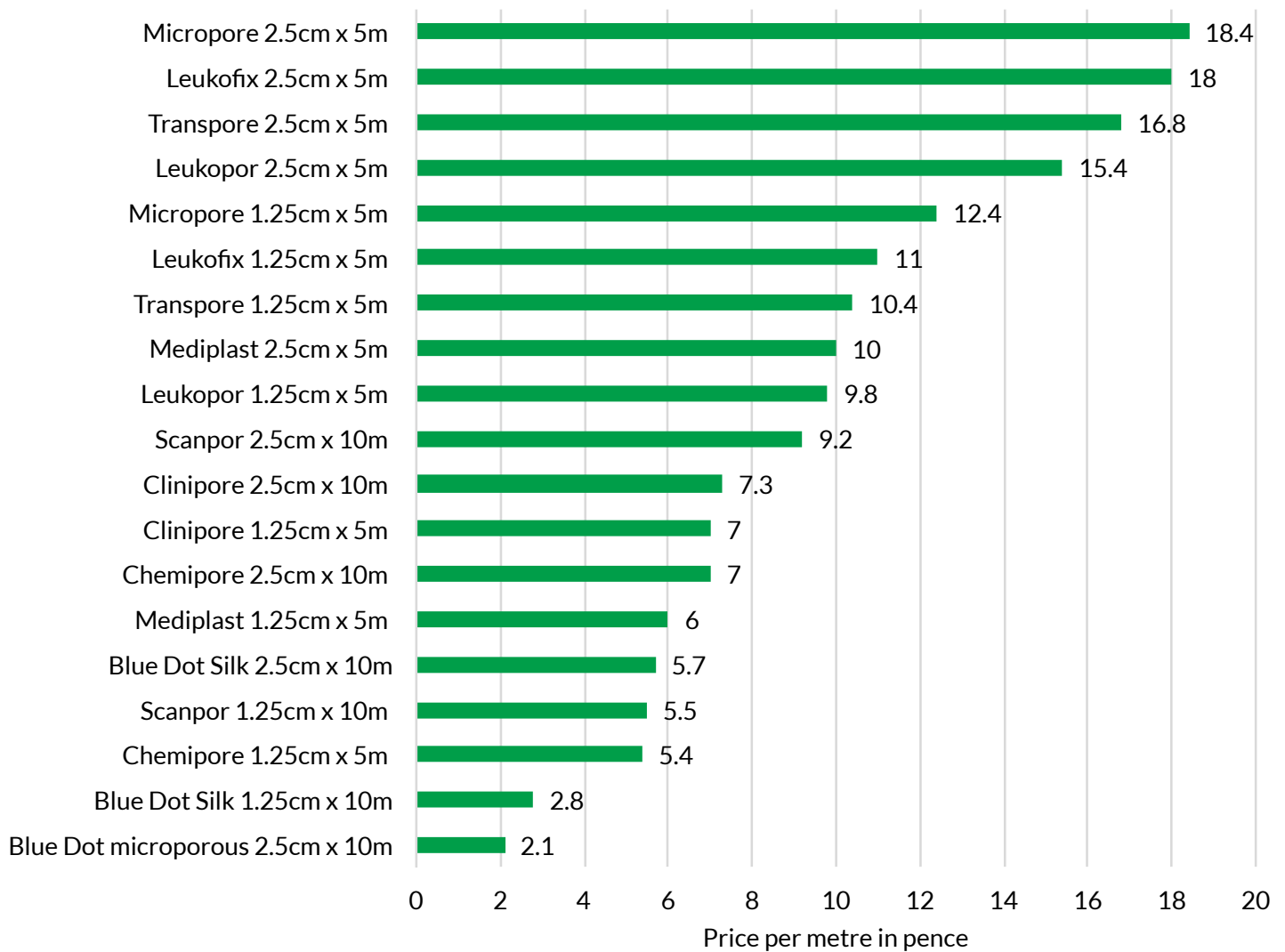
### Permeable, non-woven synthetic adhesive tape

Due to the number of products, the charts are divided into the Drug Tariff subcategories of permeable, aperture non-woven synthetic adhesive tape BP 1988 (figure 1) and permeable non-woven synthetic adhesive tape BP 1988 (figure 2), and only the smaller tape widths are included. Where there is more than one pack size, the lower cost pack (usually the largest) has been included.

**Figure 1. Cost comparison chart for permeable, apertured non-woven synthetic adhesive tape BP 1988, 1.25cm to 5cm widths (Drug Tariff January 2016)**



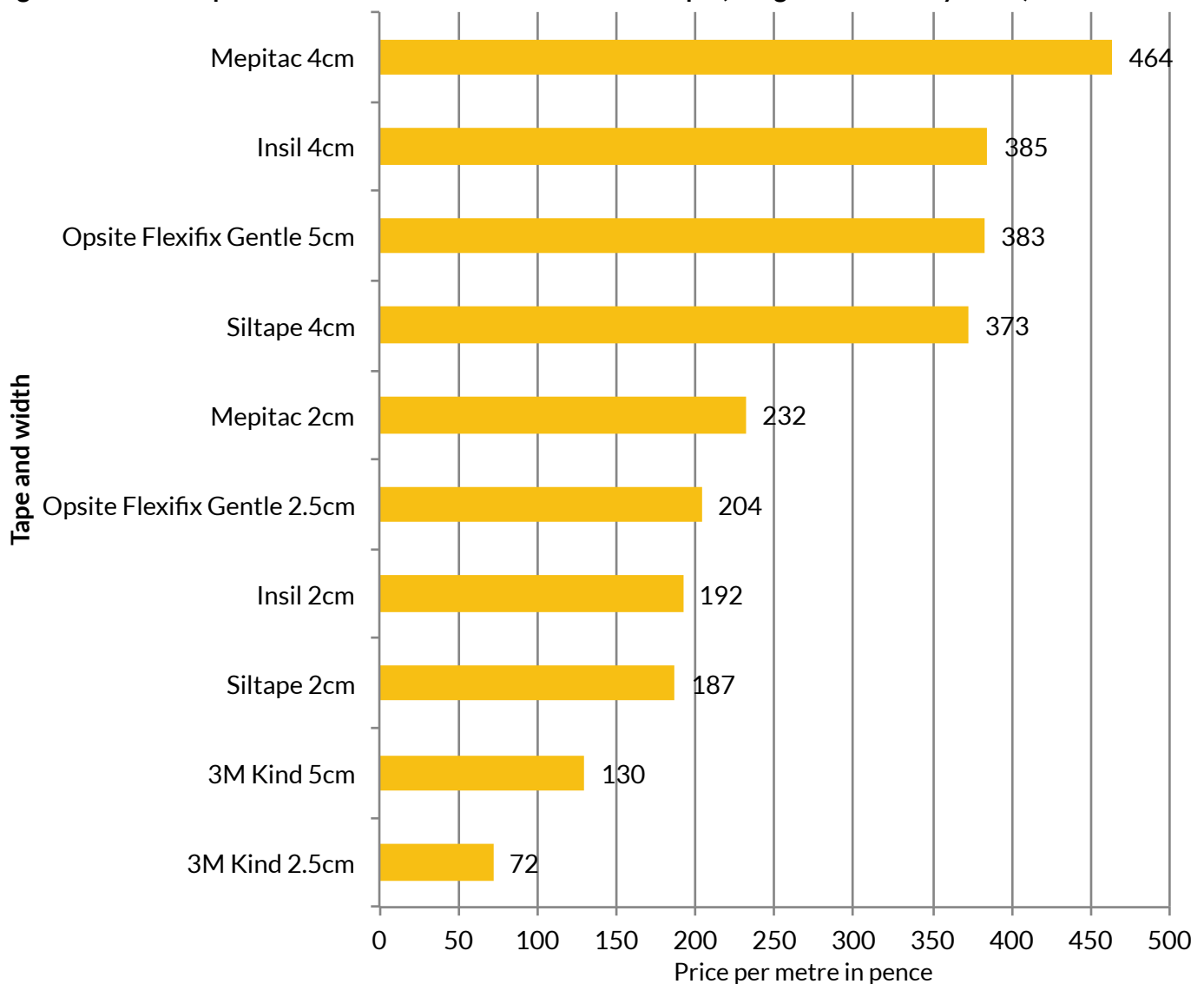
**Figure 2. Cost comparison chart for permeable non-woven synthetic adhesive tape BP 1988, 1.25cm to 2.5cm widths (Drug Tariff January 2016)**



## Soft silicone fixation tape

Soft silicone fixation tapes are the most costly option and should only be selected where skin is vulnerable and other products are unsuitable. Seek advice from a tissue viability specialist if necessary (figure 3)

Figure 3. Cost comparison chart for soft silicone fixation tape (Drug Tariff January 2016)



## Prescribing points

For all tape types, price increases as the width of the tape increases; therefore choose the narrowest tape that is suitable for the application.

Where dressings are being secured together without skin contact, choose the least costly product that secures the dressing sufficiently.

When tapes are being secured to skin, other factors that ensure suitability for the individual must also be considered.

## Savings

In England and Wales over £1.5 million is spent annually on surgical adhesive tapes (ePACT Jan - Mar 2016). It seems likely that savings could be achieved by selecting the least costly option that is suitable for the patient, which can be supported by local wound formularies.

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

**Table 1. Potential national cost savings for surgical tapes supplied via FP10 (ePACT Jan - Mar 2016)**

Annual savings if 10 <sup>th</sup> percentile cost per 1000 patients reached	£925,801 which equates to £1,523 per 100,000 patients
Annual savings if 25 <sup>th</sup> percentile cost per 1000 patients reached	£588,907 which equates to £969 per 100,000 patients.

## Summary

- A wide range of surgical adhesive tapes with varying properties is available. The choice of tape will depend on the requirements for use and the surface to which it will be applied.
- Consider characteristics such as the tape's permeability, conformability, stretch and the level of adhesion.
- Also take into account individual factors, such as the vulnerability of the person's skin.
- Optimising surgical adhesive tape use should focus on choosing products with lower acquisition costs that are suitable for the individual and the intended use.
- Choose the narrowest width tape that is appropriate.
- Reserve the use of higher cost silicone tapes for vulnerable skin where less costly alternatives are unsuitable.

## References

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## Additional PrescQIPP resources



Briefing



Data pack

Available here: <https://www.prescqipp.info/resources/category/318-wound-care-surgical-adhesive-tapes>

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