Washable products for women

WITH ever-increasing pressures on pad budgets, washable (reusable) absorbent products are often considered to be a viable alternative to disposables for managing urinary incontinence. Reusability is considered by some to be an attractive option in terms of ‘green’ or environmental issues. This option is particularly appealing for products for light incontinence when an individual may wish to wear a pad just in case.

Washable pants with an integral pad come in a wide range of styles for men, women and children. They are intended to resemble normal underwear with an additional area of material in the gusset area to absorb any leakage of urine. Prices ranging from £3.80 to £10 each represent a higher initial purchase cost than disposable products. Individuals wishing to purchase this type of product – whether they are health professionals, purchasers or users – will have little information on the performance of the products to help them make an informed choice. It is important to have comprehensive, speedy, robust, authoritative and accessible information so they can make rational choices (Fader et al, 2001).

The Continence Product Evaluation (CPE) network recently carried out a multicentre evaluation of pants with an integral pad for women with light incontinence. All 10 products available on the UK market in August 1999 were selected for inclusion. Multicentre and local research ethics committee approval was obtained for the study. Seventy-two subjects over the age of 18 with a diagnosis of stress, urge or mixed incontinence took part in the study and were recruited through continence nurse specialists and specialist physiotherapists. All subjects gave written informed consent before the study started.

Methods Each subject was asked to test one product per week for the ten weeks of the study. The CPE Network provided all the products free of charge and every subject was provided with three pairs of each type of pants pre-washed in the correct size, along with washing and drying instructions. All of the products were randomised and coded (so that the manufacturer was not obvious to the subjects). The study was a ‘cross-over’ design; this design is particularly useful for product evaluation as it means that all of the subjects test all of the products. The advantage of using this approach is that it ensures that each subject tests all products under the same conditions.

Subjects evaluated the products tested by completing the following:
■ A pant weight and leakage diary – this enabled collection of data regarding how much urine each product contained when it leaked (leakage rated on a three-point scale of none, a little and a lot). This method has been used successfully in previous CPE Network studies (Medical Devices Agency, 1998; 1999).
■ A product performance questionnaire – this comprised 14 questions relating to different key aspects of product performance, including overall opinion. Subjects rated product performance for each of these aspects on a three-point scale (good, okay, poor) at the end of each week.
■ All data were returned to the CPE office for analysis.

Results Statistically significant differences were found in 11 out of the 14 questions on the product performance questionnaire – appearance, discreetness, noiselessness, fit, comfort, comfort when dry, ability to hold urine without leakage, kindness of pad to skin, speed of drying, ability of the pants to make wearers feel confident and overall opinion. The results from two areas of the product performance questionnaire are discussed below: ability to hold urine without leakage and overall opinion. Details of the complete results are available in the final report (Medical Devices Agency, 2001).

Ability to hold urine without leaking The Sims Portex ‘Kylie Lady Extra’ was the best performing product in terms of leakage performance, being rated as ‘good’ by 47% of subjects (Fig 1). The least successful product in terms of leakage was the Shiloh Healthcare ‘Sahara High Leg’ pant, which was rated as poor by 56% of subjects. This difference was significant compared to five other products which were found to have performed significantly better, on the basis of poor ratings of leakage performance.

Overall opinion Three products performed particularly well: Robinson Healthcare’s ‘Active Full/Mini Briefs’, Sims Portex’s ‘Kylie Lady/Style Standard’ and ‘Kylie Lady/Style Super’ had the highest ratings for overall opinion. They were all rated as ‘good’ by between 52–58% of subjects (Fig 2). A significant proportion of subjects found these three products to be good, compared with three of the nine other products. The product that received the poorest overall rating was Med-I-Pant ‘Ladies Extra Protection’, which 67% of subjects rated as poor. This difference was statistically significant, with a higher proportion of subjects finding this product to be poor, compared to five of the nine other products. In addition, the Shiloh Healthcare ‘Sahara High Leg’, ‘Sahara Waist High’ and the Milton
Stay-Dry ‘Contenta Female Complete’ were also rated poorly for overall opinion by between 49–58% of testers. This was also statistically significant, with a higher proportion of subjects finding each of these products to be poor in terms of overall opinion, compared to four of the nine other products.

**Pant weight and leakage diary** Leakage data, which were collected by weighing the pants, showed that Sims Portex ‘Kylie Lady Extra’ did particularly well, with 69% of products not leaking ‘at all’ with 10g of urine in them. The results for the least successful product, the Shiloh Healthcare ‘Sahara High Leg’, showed that only 40% of pants did not leak ‘at all’ with 10g of urine in them.

**Discussion** A preliminary survey of the subjects revealed that the majority rated leakage as the most important aspect of product performance. However, it is notable that the results showed that in general the products were not rated very highly for leakage performance. Given that the main purpose of reusable pants with an integral pad is to protect users’ clothing from urine leakage, it is rather disappointing that the products as a whole did not perform better.

Preliminary results of a recent CPE network study of disposable pads for light incontinence (Medical Devices Agency, 2002) indicate that the leakage performance of disposable products is superior to that of washable pants with integral pad.

**Conclusions** Substantial differences were found between the pants with integral pads that were tested in this evaluation. These results should assist users and professionals to make appropriate purchasing choices based on their priorities.

### Table 1. Table showing the leakage results for the best performing disposable pad and washable pant

<table>
<thead>
<tr>
<th>Products</th>
<th>Not leaking at all with 10g of urine (% and confidence intervals)</th>
<th>Not leaking at all with 20g of urine (% and confidence intervals)</th>
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</thead>
<tbody>
<tr>
<td>Disposable pads for light incontinence</td>
<td>95 (81–99)</td>
<td>93 (83–98)</td>
</tr>
<tr>
<td>Washable pants with pads for light incontinence</td>
<td>69 (56–76)</td>
<td>50 (39–61)</td>
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