Clinical and cost effectiveness evaluation of low friction and shear garments
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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
The aim was to determine the effectiveness of Parafricta low-friction garments in reducing the incidence and prevalence of pressure ulceration for patients with a Waterlow score of 15 or more. The authors concluded that the low-friction garments appeared to produce better patient outcomes and cost savings. The methods were not well reported, which makes it difficult to assess the authors' conclusions.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The aim was to determine the effectiveness of Parafricta low-friction garments in reducing the incidence and prevalence of pressure ulceration for patients with a Waterlow (pressure ulcer risk assessment and prevention policy tool) score of 15 or more. The patients might or might not have had pressure ulceration on admission to hospital and were unable to reposition themselves independently.

Interventions
Two cohorts of patients at high risk of sacrum or heel skin breakdown were compared. Both cohorts received the same care, except that the second cohort wore Parafricta undergarments.

Location/setting
UK/secondary care.

Methods
Analytical approach:
The cost-effectiveness study was based on data from one cohort study for the cost and effectiveness estimates. The time horizon was three months. The perspective was not reported.

Effectiveness data:
The effectiveness data were from a non-randomised cohort study. A cohort of 204 patients did not receive the intervention, while a second cohort of 165 patients wore the Parafincta garments. The incidence data for each group were collected for three months and prevalence data was collected at the end of each three-month period. It was assumed that developing or worsening pressure ulcerations lengthened hospital stay. The four main clinical outcomes were patients with pressure ulcerations at hospital admission, who developed additional ulcers or did not, or those without ulcerations on admission, who remained ulcer free or developed ulcers.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
The primary measures of benefit were the incidence of pressure ulcerations on admission and the incidence of new ulcers during hospital stay.

Cost data:
The authors reported three main cost categories (bed stay, dressings, and support surfaces) and the data were from the Isle of Wight Primary Care Trust finance department. Bed stay costs were based on the average cost of stay. Dressing
Analysis of uncertainty:
Ninety-five percent confidence intervals were generated for incidence rates and length of stay for the different clinical outcomes.

Results
There was a statistically significant 16% reduction in the number of patients who developed pressure ulcerations following the use of the low-friction garments compared with no such garments. The number of patients who developed pressure ulcerations after admission was 16% higher without the garments than with them, which indicated that patients who used the low-friction garments were less likely to develop a pressure ulceration after admission. Twenty-one percent fewer patients who were admitted with pressure ulcerations deteriorated when using the low-friction garments.

The costs, calculated by comparison of patient throughput, suggested that the savings associated with preventing skin breakdown outweighed the cost of the products used. The base-case model indicated a saving of more than £63,000 per 100 at-risk patients.

Authors’ conclusions
The authors concluded that the low-friction garments appeared to produce better patient outcomes and cost savings.

CRD commentary
Interventions:
The interventions were described, but it was unclear whether usual practice was included.

Effectiveness/benefits:
The effectiveness data were from a non-randomised study. It was unclear whether adjustments were made for confounding between the two cohorts; if none were made, that would significantly increase the uncertainty of the effectiveness estimate comparisons. The benefit measure was disease-specific, which may have reduced the scope for comparisons with studies of other interventions. The benefit measure did not take into account morbidity or mortality, which might have been useful for this study.

Costs:
The study perspective and time horizon were not reported, which makes it unclear whether or not all relevant cost data were included in the study. The unit costs used in the base case model were reported, but little information was provided on how these estimates were derived. The source of the cost data was discussed. These data were from one Primary Care Trust, which might limit their generalisability. The price year for the dressing costs was reported, but it was unclear whether this was the price year for the other costs and so it was unclear whether the costs were adjusted for inflation.

Analysis and results:
The results of the study were adequately reported. The methods of the economic evaluation were not well reported. The costs and benefits were not combined and this was a cost-consequences analysis. Very little sensitivity analysis was undertaken, and the uncertainty surrounding the estimates was not defined. The authors reported as a limitation that they did not control for differences between the groups before and during the treatment period.

Concluding remarks:
The methods were not well reported, which makes it difficult to assess the authors’ conclusions.

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