'The day of the soft towel?' Comparison of the current bed-bathing method with the soft towel bed-bathing method

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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.

Health technology
The soft towel bed-bathing method was compared with the current bed-bathing method. The Soft Towel bed bath required 2 L hot water and 30 mL Dermalux Soft Towel lotion, three rolled towels and two disposable washers. The current bed bath required a basin of approximately 3 L water, a bar of soap, one to two washers and two towels.

Type of intervention
Secondary prevention: hygiene care.

Economic study type
Cost-effectiveness analysis.

Study population
The study population comprised hospitalised patients of either gender and aged over 18 years, from both surgical and medical wards (including orthopaedics, cardiology, cardiothoracic surgery and coronary care), and nursing staff (including registered nurses, enrolled nurses and trainee, enrolled nurses). Only patients who were physically and mentally capable were eligible for interview.

Setting
The setting was a hospital. The study was undertaken at the Royal North Shore Hospital, Northern Sydney Area Health Service, Australia.

Dates to which data relate
The dates to which the data related were not specified. The price year was not reported.

Source of effectiveness data
The effectiveness data were gathered from a single study.

Link between effectiveness and cost data
The costing was undertaken prospectively on the same group as that used in the effectiveness study.

Study sample
The study sample comprised 200 patients who were interviewed. The sample was split between the two options, 100 patients received the Soft Towel bed bath and 100 patients received the current bed bath. In addition, 200 nursing staff were recruited. Power calculations to determine the sample size were not reported.
Study design
The study was a prospective non-randomised crossover trial that was conducted in a single centre. All patients requiring a bed bath received the method being used at the time, as designated by the study. The study was performed in two stages, each of 3 months in duration.

Analysis of effectiveness
The primary outcomes were patient and nurse satisfaction. These were assessed using a questionnaire, which formed part of a semi-structured interview. Patients and nursing staff on the same wards were interviewed. A research assistant interviewed all of the patients about comfort, privacy, cleanliness, skin condition, relaxing and warmth (semi-structured interviews). The nursing staff completed a questionnaire related to learning, performing, patient contact, patient feedback, cleanliness and the condition of their hands. Both quantitative and qualitative analyses were conducted. The quantitative analysis used the response scores of both the patients and nursing staff, while the qualitative analysis was based on their comments.

Effectiveness results
Only the statistically significant results are reported here.

For skin softness, comfort and relaxation, there were statistically significant variations between the two sets of scores, (p<0.05), particularly for the skin softness score, (p=0.001), in favour of the Soft Towel bed bath method.

In terms of the response of the nursing staff, with the exception of the dry hands criterion, a statistically significant difference in favour of the Soft Towel bed bath was observed for each criterion, (p<=0.001).

The results of the qualitative analysis strengthened the patients and nursing staff’s positive perception of the Soft Towel bed bath method.

Clinical conclusions
The Soft Towel bed-bathing method was more beneficial for the patients. In addition, the nursing staff rated the Soft Towel bed bath as the preferred bed-bathing method.

Measure of benefits used in the economic analysis
The authors did not develop a summary benefit measure. A cost-consequences analysis was therefore performed.

Direct costs
The direct costs were for the solution or soap, water, laundry, equipment and labour. The figures for labour were derived using the average wages of third-year registered nurses, second-year enrolled nurses and trainee enrolled nurses, as well as the time taken to perform the bed-bathing method. Electricity was considered as a nil cost. The cost of waste was not available and was therefore excluded from the analysis. Details of the costing were obtained through discussion with the staff of the Royal North Shore Hospital and the Northern Sydney Area Health Service. Discounting was not relevant since the costs were incurred in less than one year. The costs and the quantities were reported separately. The cost analysis was conducted for a ward where a minimum of five bed baths per day were performed.

Statistical analysis of costs
No statistical analysis of the costs was carried out.

Indirect Costs
No indirect costs were reported.
Currency
Australian dollars (Aus$).

Sensitivity analysis
No sensitivity analysis was carried out.

Estimated benefits used in the economic analysis
Not applicable.

Cost results
The total cost per bath was Aus$2.84 with the Soft Towel method and Aus$3.79 with the current method.

The total annual cost was Aus$5,183.00 with the Soft Towel method and Aus$6,916.75 with the current method.

The Soft Towel bed bath was cost-saving, in the region of 25% per year.

Synthesis of costs and benefits
The authors did not produce a summary measure that combined the costs and effectiveness.

Authors' conclusions
The authors rejected the three hypotheses and found the Soft Towel bed bath to provide more patient and nurse satisfaction and savings compared with the current bed-bathing method.

CRD COMMENTARY - Selection of comparators
The comparator was justified on the grounds that it represented current practice in the authors' setting. You should consider whether this is a widely used technology in your own setting.

Validity of estimate of measure of effectiveness
Satisfaction questionnaires were used to assess the effectiveness of each alternative. However, the validity of these questionnaires was not assessed. A non-randomised crossover study was used to establish the effectiveness. However, a randomised trial would have increased the internal validity of the results obtained. No baseline characteristics of the study sample were reported. Hence, it is unclear whether the sample was representative of the study population. Statistical analyses were undertaken, but no confounding factors were taken into account. The qualitative analysis appears to have been unnecessary and irrelevant, given the method the authors used to report and combine the results.

Validity of estimate of measure of benefit
The authors did not derive a measure of health benefit. The analysis was therefore categorised as a cost-consequences study.

Validity of estimate of costs
The perspective adopted for the economic analysis was not specified, but it is likely to have been that of the health care system. It would appear that all the costs relevant to this perspective have been included. The cost of disposing the solution containers was not included in the analysis because it was unavailable. The costs and the quantities were reported separately, which enhances generalisability. No statistical analysis of the quantities and prices was performed. Discounting was unnecessary since the costs were incurred in one year. The date to which the prices related was not reported, thus hindering any reflation exercise.
Other issues
The factors highlighted may have implications for both the internal and external validity of the study. Therefore, the results provided in this article cannot easily be generalised to other settings or to other countries. The authors made appropriate comparisons of their findings with those from other studies. The authors reported no further limitations of their study.

Implications of the study
The authors recommend that the Soft Towel bed bath should be the preferred method of meeting the hygiene needs of patients restricted to bed.

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None stated.

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