Two-year follow-up of the 'Families for Health' programme for the treatment of childhood obesity

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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 objective was to assess the costs and outcomes of a family-based group treatment programme for childhood obesity. The authors concluded that the Families for Health programme was a promising new childhood obesity intervention, and a randomised controlled trial was needed. The methods were adequate, but more details on the costs would have been useful. Due to the study design limitations, the authors appropriately concluded that their results needed further investigation.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The objective was to assess the costs and outcomes of a family-based group treatment programme for childhood obesity.

Interventions
The Families for Health programme was recorded in a manual and lasted for 12 weeks, with one 2.5 hour session each week. It included parallel groups of children aged seven to 11 years, who were overweight (a body mass index, BMI, of 91st to 97th centile) or obese (a BMI of 98th centile or higher), and their parents. The sessions consisted of approaches and techniques that were known to be effective from parenting programmes, school-based emotional development programmes, and family lifestyle programmes. This programme was compared with no intervention.

Location/setting
UK/community care.

Methods
Analytical approach:
The effectiveness and cost information was from a study of the Families for Health programme. The time horizon was two years and the authors did not explicitly report the perspective.

Effectiveness data:
The effectiveness data were from a before-and-after pilot study of the Families for Health programme (Robertson, et al. 2008, see 'Other Publications of Related Interest' below for bibliographic details). This study included 21 families, with 27 children, with nine-month follow-up data on 16 families, with 22 children. These 16 families were contacted at two years and 13 families, with 19 children, provided complete data. The primary outcome was the change from baseline in the children’s BMI z-score at two-year follow-up. The children also completed the 23-item Pediatric Quality of Life (PedsQL) inventory and the Day in the Life Questionnaire to record portions of fruit and vegetables eaten.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
The measure of benefit was a unit change (reduction) in BMI z-score at the two-year follow-up, compared with baseline.
Cost data:
The direct costs of providing the Families for Health programme included the facilitator’s time, hire of the venue, and consumables. The costs to families were assessed, after the intervention, by parents completing a questionnaire about their additional food, clothes, time, child care, and travel costs. All costs were reported in UK £.

Analysis of uncertainty:
An intention-to-treat analysis was undertaken. Six families enrolled more than one child into the programme and, to account for the hierarchical nature of these data, the authors fitted linear mixed models with random family effects to the changes from baseline.

Results
With the programme, the mean change in BMI z-score at two years, from baseline, was -0.23 (95% CI -0.42 to -0.03). The cost of providing the programme was £517 per family or £402 per child who started the intervention. The average direct cost to the family was £58 and the indirect cost (impact on work and leisure time) was 33 hours.

The additional cost per unit decrease in BMI z-score at two-year follow-up was £2,543.

Authors’ conclusions
The authors concluded that the Families for Health programme was a promising new childhood obesity intervention, and a randomised controlled trial was needed.

CRD commentary
Interventions:
The intervention was briefly reported, with further details of the parents’ and children's programmes reported in an appendix. The pre-intervention period (without the programme) was compared with the period after the intervention.

Effectiveness/benefits:
The effectiveness data were from a small before-and-after study of parents and children who acted as their own controls. The study sample, follow-up, outcome measures, and statistical analyses were appropriately reported. The authors acknowledged that this design made it difficult to assess whether the observed changes were due to the intervention or other changes over time not measured by the study. The clinical endpoint was intermediate and a summary benefit measure, such as quality-adjusted life-years, would have been more appropriate and would have allowed comparisons to be made with the benefits of other health care programmes.

Costs:
The authors did not explicitly report the perspective and only brief details of the intervention were provided, making it difficult to assess if all the relevant major costs were included. The price year was not explicitly reported, but appears to have been 2006. The lack of detail on costs makes it difficult to assess the quality of this part of the analysis.

Analysis and results:
The cost and outcome data were from one study. Sufficient details of the statistical analysis were presented. All differences were tested for significance and the results were presented. The uncertainty was not investigated, as the cost and outcome estimates were not varied in sensitivity analyses. The authors reported that a major limitation was the lack of a control group, which made it difficult to assess whether the observed changes were due to the intervention or other changes over time.

Concluding remarks:
The methods were adequate, but more details on the costs would have been useful. Due to the limited study design, the authors appropriately concluded that their results should be corroborated by a randomised controlled trial.

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