

FACT SHEET SIX

Cost per patient 2011 / 2012

The economic analysis for DAFNE performed in 2002 by the York Health Economics Consortium (YHEC) and published in 2004^[1] calculated the cost per patient as £550. A lay person summary of this published paper is provided later in this Fact Sheet.

However since the analysis was performed many of the DAFNE costs used by YHEC have decreased, i.e:

- ✓ Proposed QA programme was different and more expensive to that now employed.
- ✓ Level of educator and administration backfill is now believed to be less than originally assumed (YHEC also based their calculations on the assumption that the centre would deliver 15 patient courses per year).
- ✓ Educator and admin salaries were based on 13% on-costs; these now vary upon Agenda for Change grade between 21% and 23%.

1 Shearer A, Bagust A, Sanderson D, Heller S, Roberts S. Cost effectiveness of flexible intensive insulin management to enable dietary freedom in people with Type 1 diabetes in the UK. *Diabetic Medicine*. 2004; 21 (5): 460-7

*Costs correct when sent to print

Recalculated cost per patient based upon the same parameters used by YHEC in their calculation but using 2011/2012 costs*, structure and anticipated backfill, are detailed in the table overleaf.

Lay person summary of YHEC cost effectiveness study

The cost-effectiveness study used modelling techniques to estimate the morbidity, mortality, and economic outcomes of implementing the DAFNE programme.

Methods

Outcomes of standard practice for treating Type 1 diabetes (pre-specified insulin injections) were compared to those of the introduction of the DAFNE programme. Results were estimated over a period of 10 years post-treatment. Based on the UK DAFNE trial, glycated haemoglobin (HbA1c) levels remained constant for standard care, whereas HbA1c levels were assumed to decline over 12 months post-treatment in the DAFNE cohort by 0.9%.

The model used clinical data from three randomised controlled trials to simulate the progression of microvascular complications. The progression of complications over time and between severity levels was combined with mortality data to calculate total life years (LYs) gained for each

| | Cost for 6 courses per year | Cost for 12 courses per year | Cost for 15 courses per year |
|---|--|---|---|
| Educator backfill @ 10 days per course based on AfC top band 7 incl. 22.3% on-costs | £11,361.15 | £22,722.30 | £28,402.88 |
| A&C backfill @ 3 days per course based on AfC top band 3 incl. 22% on-costs | £1,571.91 | £3,143.81 | £3,929.77 |
| Patient resources @ £4.28/patient | £205.44 | £410.88 | £513.60 |
| Training 2 x Educators and 1 x Dr - 10% depletion of staff per year | £300.00 | £300.00 | £300.00 |
| DAFNE set up costs - 10% depletion per year | £141.30 | £141.30 | £141.30 |
| Central Administration contribution | £3,650.00 | £3,650.00 | £3,650.00 |
| Total | £17,229.80 | £30,368.29 | £36,937.55 |
| Number of patients | 48 | 96 | 120 |
| Cost per patient | £358.95 | £316.34 | £307.81 |

* Note: Costs correct when sent to print and are subject to change.

patient cohort. Quality of life weights were also combined with LYs to estimate quality-adjusted life years (QALYs) associated standard care and DAFNE.

NHS costs associated with standard care or DAFNE, and with the treatment of progressing complications were used to estimate a total cost for patients in each cohort over the 10 years of the model.

Results

Costs: The DAFNE cohort was estimated to have reductions in mortality, blindness, end stage renal disease, foot ulceration/ amputation, and episodes of ketoacidosis, as compared with standard care. These

reductions in complications resulted in a mean saving of £3238 per patient over 10 years. The majority of cost savings occurred from avoiding foot ulcers and renal dialysis.

The cost savings as a result of reduced complications were partly offset by the cost of delivering the DAFNE programme (mean cost per patient over 10 years = £545) and the more frequent insulin injections required in the DAFNE cohort than in standard care (mean cost per patient over 10 years = £456).

Overall, it was estimated that the DAFNE programme would save the NHS £2,237 per patient over 10 years and would break even at approximately 4.5 years post intervention.

Cost-effectiveness: For the 10 years included in the model, DAFNE produces an additional 5 life years, 12 QALYs, or 9 QALYs for every 100 patients treated in comparison with the standard care. Given that DAFNE is more effective and less costly than standard care it is clearly cost-effective.

Conclusions and Impact

The results of this cost-effectiveness modelling study suggest that for an NHS centre implementing the DAFNE programme cost savings arising from a reduction in microvascular complications would outweigh the additional costs of providing the programme after approximately 4.5 years. In the long run, DAFNE could be a cost saving intervention for a provider to implement, whilst also yielding additional mortality and morbidity benefits over and above standard diabetic care. Further incentives for providing the DAFNE programme include its alignment with the National Service Framework for Diabetes and with the NICE guidance for the use of patient education in diabetes care.

DAFNE Online is an independent community of DAFNE Graduates, Health Care Professionals, Management and friends and family of those with Type 1 diabetes. Please visit the website to find out more.

www.DAFNEonline.co.uk

For the latest information about DAFNE please check the website or email:

dafne@northumbria-healthcare.nhs.uk

www.DAFNE.uk.com