Enhanced diabetes care to patients of south Asian ethnic origin (the United Kingdom Asian Diabetes Study): a cluster randomised controlled trial

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
This study evaluated the benefits of an enhanced diabetes care package in UK general practices for patients of south Asian ethnic origin with type two diabetes. Small benefits were observed, but the authors concluded that the intervention was not cost-effective. Although the methodology of the clinical study appears to have been appropriate and the reporting was clear and transparent, the economic evaluation was limited, and insufficient to permit an in-depth understanding of its validity.

Type of economic evaluation
Cost-utility analysis

Study objective
This study evaluated the benefits of a culturally sensitive, enhanced diabetic care package in UK general practice for the improvement of cardiovascular risk factors in patients of south Asian origin with type two diabetes.

Interventions
Common procedures for the management of blood pressure, diabetes, and lipids were used for all patients. The intervention was an additional practice nurse who assessed patients every two months, link support workers who contacted patients before and after their appointments to ensure compliance and to provide educational material in local languages, and a community nurse specialising in diabetes who provided support to the practice teams.

Location/setting
UK/twenty-one general practices in central Coventry and Birmingham, serving a population of predominantly south Asian ethnic origin.

Methods
Analytical approach:
The economic evaluation was conducted alongside a single trial. The time horizon was two years and the authors did not report the study perspective.

Effectiveness data:
The evidence came from a single multi-centre cluster randomised trial. The nine intervention practices included 868 patients and the 12 standard care practices included 618 patients. Adjustments for clustering and potential confounding factors were conducted using hierarchical, combined fixed and random effects models. The primary outcomes were blood pressure, cholesterol and haemoglobin A1c at two years.

Monetary benefit and utility valuations:
The EuroQol at five dimensions (EQ-5D) was used to compare quality-adjusted life-years (QALYs) between the two procedures.

Measure of benefit:
The measure of benefit was QALYs.

Cost data:
The direct costs included, staff salaries, travel and subsistence, equipment costs, payment to practices, and prescribing. These were based on actual expenditure incurred on items throughout the study period. Although the time horizon was two years, discounting was not reported. The currency was UK pounds sterling (£) and the price year was not stated.

Analysis of uncertainty:
: Not reported.

**Results**

Only the intervention costs and incremental results were reported.

The incremental costs of the intervention per patient over two years were £434 (£406 for the enhanced care service, and £28 for the increased prescription costs for both diabetic and non diabetic drugs).

Although the overall quality of life deteriorated in both groups, the incremental QALYs for the intervention were 0.015. Thus, the incremental cost per QALY was £28,933.

**Authors’ conclusions**

The authors concluded that the nurse-led intervention was not clearly cost-effective. Although small benefits were observed, stricter targets in general practice and motivational measures were needed to achieve the best possible outcomes in south Asian patients with diabetes.

**CRD commentary**

**Interventions:**
The enhanced care system was described in the paper, with the authors presenting a reasonable description of the various components of the intervention (such as the nurse and link workers), but less detail of their tasks. Given the lack of detail surrounding their actual tasks the transferability of the intervention to other settings may be difficult.

**Effectiveness/benefits:**
The main objective was focused on the clinical analysis and as such the details of the clinical outcomes were well presented. However, due to this focus few details were presented on the derivation of the QALY and no data were presented on the baseline or final EQ-5D measurements.

**Costs:**
A study perspective was not reported. Further, given the lack of detail presented on the included costs and any adjustments made, it is difficult to ascertain if all appropriate costs have been considered or analysed appropriately. It is apparent that the main focus was the clinical trial, however, as the cost-effectiveness conclusions were presented, more details on the cost analysis would have allowed a better assessment on the validity of these conclusions.

**Analysis and results:**
The clinical trial would appear to have been well conducted. However, the economic evaluation was not well reported with only the mean incremental QALYs, the intervention costs and the incremental cost-effectiveness ratio being presented. No assessment of uncertainty was conducted and no ranges or confidence intervals were given. The level of reporting and the generalisability of the economic part of this study were rather limited.

**Concluding remarks:**
Although the methodology of the clinical study appears to have been appropriate and the reporting was clear and transparent, the economic evaluation was not reported in sufficient detail to allow any real assessment of its validity to be undertaken. Therefore, it is difficult to make an objective assessment of whether the authors’ conclusions were robust.

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