Increasing heart-health lifestyles in deprived communities: economic evaluation of lay health trainers

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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 study assessed the cost-effectiveness of using locally-trained (lay) ‘health trainers’ to improve heart-health lifestyles among adult participants from deprived communities with at least one cardiovascular disease risk factor. The authors concluded that their results suggested that the lay health-trainer intervention was cost-effective but, due to a large level of uncertainty in their findings, further research was needed. The methodology of the study seemed appropriate and was transparently reported. The authors’ conclusions appear appropriate.

Type of economic evaluation
Cost-effectiveness analysis, cost-utility analysis

Study objective
The study assessed the cost-effectiveness of using a lay-health-trainers intervention to improve heart-health lifestyles in adults with at least one cardiovascular disease risk factor from deprived communities.

Interventions
The intervention involved a team of lay health trainers (recruited from the same deprived setting and trained by the research team) who could: explore and identify changes the participant’s diet; provide information and advice to change beliefs about cardiovascular disease risk and behaviours; explore advantages and disadvantages about change; and set goals and discuss challenges. The intervention was provided for three months (with contact six times during that period). In addition to the intervention, the participants also received health promotion literature. The comparator group received health promotion literature but no further support.

Location/setting
UK/primary care

Methods
Analytical approach:
The analysis was based on a single clinical study that was conducted in the study setting involving five general practitioner practices serving deprived communities (within Liverpool Primary Care Trust, UK). The time horizon was the six-month follow-up period of the trial. The authors stated the study perspective was that of the National Health Service (NHS) and Personal Social Services (PSS).

Effectiveness data:
The evidence came from a single clinical study, a randomised controlled trial (RCT) of the use of lay health-trainers plus health promotion literature compared with health promotion literature alone. The trial randomised 114 individuals (adults aged 18 years and older) to control or intervention groups in a ratio of 2:1 in favour of the intervention group. Participants were followed up for six months. The main clinical effectiveness estimate was the change in resource use and health-related quality of life (measured by the EQ-5D).

Monetary benefit and utility valuations:
The source of utility valuation were responses to the EQ-5D by the participants in the trial (completed at baseline and six months), which were converted to societal utility estimates for the described health states using standard methodology.
Measure of benefit:
Quality adjusted life years (QALYs) were used as the summary benefit measure.

Cost data:
The costs included: the recruitment, training, and supervision of lay health-trainers; delivery the intervention by lay health-trainers; and service use and medications of the participants. The sources of resource use included data collected during the trial from lay health-trainers and from participants using questionnaires. Prices were based on national unit costs. The price year was reported as the 2008/9 financial year. All costs were presented in UK £.

Analysis of uncertainty:
One-way and probabilistic sensitivity analyses were conducted, with the results presented in text and tables.

Results
For the lay health-trainer intervention, the mean QALYs gained for participants were 0.028 compared with 0.022 in the control group, an incremental QALY gain of 0.007 for the intervention over the six-month trial period.

The lay health-trainer intervention itself was estimated to cost £151.01. The mean change in cost for the control group (NHS and PSS costs only) was -£21.28; the mean change in cost for the intervention group (lay health-trainer intervention plus NHS and PSS costs) was -£53.16 (-£53.16 in Table 1). The incremental cost of lay health-trainer was £97.85 over the six-month trial period.

The incremental cost-effectiveness ratio of the lay health-trainer intervention was £14,480 per QALY gained compared with the control group. The probability that the lay health trainer intervention was cost-effective at a willingness to pay threshold of £20,000 per QALY was 39.5%.

Authors’ conclusions
The authors concluded that their results suggested that the lay health-trainer intervention was cost-effective (constituted value for money). However, due to a large level of uncertainty surrounding their findings, further research was needed.

CRD commentary
Interventions:
Both the intervention and comparator were clearly and concisely reported. The intervention was relevant to the study setting, but may not be applicable to other settings.

Effectiveness/benefits:
The methods used to generate the clinical effectiveness estimates were fully described. Adequate details were given about the trial design. The source of clinical evidence was a study of strong methodological design and relevance to the study setting (Liverpool, UK). It was unclear whether additional evidence was available which could have been incorporated into an economic analysis. The measurement of utilities was described in full and was appropriate for the study setting; the methods supporting the estimation of QALYs were transparently reported.

Costs:
The costs were relevant to the study perspective and were collected prospectively in a study with strong methodological design. The methods used to estimate costs were well reported and were consistent with national recommendations (in the UK). The level of reporting was adequate. The lack of discounting was appropriate in view of the short time horizon of the study.

Analysis and results:
An incremental analysis was appropriate to compare the relative cost-effectiveness of the intervention with a control. The authors used appropriate methods to assess uncertainty in results of the analysis. It was unclear whether the time horizon (six month follow-up period) was sufficient to capture fully the impact of the intervention on costs or outcomes, or whether any impact was likely to be sustained (over the longer term). The level of reporting was generally good and the authors acknowledged some key limitations of their study.

Concluding remarks:
The methodology of the study seemed appropriate and was transparently reported. The authors’ conclusions appear appropriate.

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