Cost effectiveness of incremental programmes for lowering serum cholesterol concentration: is individual intervention worth while?

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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
Cholesterol lowering programmes.

Type of intervention
Primary prevention.

Economic study type
Cost-effectiveness analysis, cost-utility analysis.

Study population
Male population, aged 40-49 years of age.

Setting
The study was carried out in Norway.

Dates to which data relate
Price related to 1990.

Source of effectiveness data
Single study.

Modelling
Epidemiological cohort model (model of survival and disease).

Measure of benefits used in the economic analysis
QALYs and life years gained. Author valuations were used to assess the health states.

Direct costs
Direct costs were to the health service. For population based promotion of healthier eating habits these were a health education programme using various media. For generic dietary treatment and monitoring to reduce total serum cholesterol these were first and confirmatory screening, 1.5 cholesterol tests and visits to doctor/year. CHD, CABG, and myocardial infarction. For generic dietary and drug treatment and monitoring combined to reduce total serum cholesterol these were first and confirmatory screening, and 3.3 cholesterol tests and visits to doctor/year. Price information related to 1990.
Currency
UK pounds sterling (£). In the DH Register of Cost-Effectiveness Studies, the original results were reflated to 1991 using the NHS pay and prices index.

Sensitivity analysis
Sensitivity analysis was carried out using the method of single parameter variation.

Synthesis of costs and benefits
Outcome and cost duration was to 69, and treatment side-effects were not included. Costs and benefits were discounted at 7%. The incremental cost per life-year gained for the population based promotion of healthier eating habits compared to no intervention was £13; for generic dietary treatment and monitoring to reduce total serum cholesterol compared to a population based approach was £13606 and; for generic dietary and drug treatment and monitoring combined to reduce total serum cholesterol compared to a population based approach was £122003. The incremental cost per QALY gained for the population based promotion of healthier eating habits was £11 compared to no intervention; for generic dietary treatment and monitoring to reduce total serum cholesterol was £109969 and; for generic dietary and drug treatment and monitoring combined to reduce total serum cholesterol was £137656, both compared to a population based approach.

CRD Commentary
(This commentary was not written by CRD, but by the authors of the DH Register.)

1) Treatment side-effects are not included. 2) The parameters investigated by sensitivity analysis and the ranges of values were not adequately justified. 3) There were health omissions. For population based promotion of healthier eating habits: 4) Quality of life valuation is arbitrary but included are drug side effects, labelling & non-fatal CHD events. 5) There is great uncertainty as to the magnitude of serum cholesterol reduction achievable in the population approach. For generic dietary treatment and monitoring to reduce total serum cholesterol: 6) Benefits from serum cholesterol reduction are estimated from observational rather than intervention data. For generic dietary and drug treatment and monitoring combined to reduce total serum cholesterol: 7) Potential increases in non-CHD events and mortality, in the drug treatment group, are not addressed.

Bibliographic details

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Subject indexing assigned by NLM

MeSH
Adult; Anticholesteremic Agents /therapeutic use; Cholesterol /blood; Cholesterol, Dietary /administration & dosage; Coronary Disease /prevention & control; Cost-Benefit Analysis; Health Promotion /economics; Humans; Hypercholesterolemia /diet therapy; Male; Middle Aged; Norway; Quality of Life; Retrospective Studies; Value of Life

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