Management of day-surgery patients with cataract attending a peripheral ophthalmic clinic

Rose K, Waterman H, Toon L, McLeod D, Tullo A

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
Organisational models of management of day-surgery patients with cataract referred to a peripheral ophthalmic clinic and who subsequently underwent surgery at a main eye hospital

Type of intervention
Other: medical management.

Economic study type
Cost-effectiveness analysis.

Study population
Patients with cataract.

Setting
Hospital. The economic study was performed in the UK.

Dates to which data relate
Effectiveness and resources data related to the period Sept. 1995 to Sept. 1996. The prices related to the financial year 1996/7 (as the main financial year of the study was 1996).

Source of effectiveness data
Effectiveness data were derived from a single study.

Link between effectiveness and cost data
The analysis of the cost data was undertaken prospectively on the same patient sample as that used in the effectiveness study.

Study sample
Patients with cataract (who were attending a peripheral clinic at least 5km away from the main ophthalmic hospital) were randomised into two groups to receive either:

(1) the experimental model of care (n=28) in which patients received pre-operative assessment by a trained ophthalmic nurse at the peripheral clinic (group A), or

(2) the control model of care (n=30) in which patients received a separate appointment for pre-operative assessment at the main ophthalmic hospital (group B).
A power calculation was used to ensure that the sample size was sufficient to detect a difference between groups of the order of 1SSD of a continuous measure at the 5% level.

Study design
Randomised controlled trial. 25 patients (18 women, 7 men; mean age 77 years) completed the study in group A, and 24 patients (18 women, 6 men; mean age 76 years) completed the study in group B. In terms of procedures, 16 and 9 patients underwent phacoemulsification and extracapsular cataract extraction (ECCE) in group A, and 16 and 8 patients underwent phacoemulsification and extracapsular cataract extraction (ECCE) in group B.

Analysis of effectiveness
Outcomes assessed included changes in visual acuity, subjective visual function (VF-14), anxiety and depression (HADS), and patient satisfaction.

Effectiveness results
Changes to a visual acuity of 6/12 were similar for both groups and there were no statistical differences in mean VF-14 scores (p=0.119) or levels of both depression (p=0.939) and anxiety (p=0.526). The mean waiting times from GP referral to first hospital visit and from then to surgery were 3.5 months and 3 months respectively for group A, whereas they were 4 months and 3 months for group B. In terms of patient satisfaction, the level of satisfaction was greater for group A.

Clinical conclusions
Both organisational models are compatible with good visual outcome and do not affect patients' psychological well-being.

Measure of benefits used in the economic analysis
Visual acuity, subjective visual function (VF-14), anxiety and depression (HADS), and patient satisfaction were the benefit measures. As no summary benefit measure was utilised in the economic analysis, and the intervention and comparator had similar outcomes, a cost-minimization exercise was conducted.

Direct costs
Quantities and costs were not analysed separately. Health service costs to the NHS and to the patient were considered including the cost of transport and staff and the time spent at pre-operative assessment and implications for patients and carers (e.g. time taken away from the workplace or the necessary provision of childcare). Costs were taken from NHS peripheral and ophthalmic hospital finance data. 1996/1997 prices were used.

Statistical analysis of costs
Not performed.

Indirect Costs
Indirect costs were not considered, although the concept of working time lost was alluded to. The working time lost by the carers was not evaluated.

Currency
UK pounds sterling (£).
Sensitivity analysis
Not performed.

Estimated benefits used in the economic analysis
See effectiveness results reported above.

Cost results
Group B patients had to make an additional visit to the main ophthalmic hospital for their pre-operative assessment. 22 out of 24 of these patients arranged their own transport (private car, taxi or public transport) to the appointment resulting in a mean additional cost of 4.32, whilst the other 2 patients came by hospital transport, resulting in a mean additional cost to the NHS of 26.30. 15 of the 24 patients were accompanied by carers of whom 4 had to take time away from the workplace and 2 had to arrange child care. Group B patients also spent longer in pre-operative assessment. Total clinic time for undergoing pre-operative assessment was 55 minutes (range: 33 - 94) in group A and 137 minutes in group B (range: 60 - 259). For the outpatient appointment, the cost was 45. Mean staff costs for pre-operative assessment were 25.64 for group A (range: 22.92 - 32.44) and 29.28 for group B (range: 23.46 - 39.59).

Synthesis of costs and benefits
Costs and benefits were not combined.

Authors’ conclusions
The authors concluded that, while day-surgery was a safe and cost-effective method, it had implications for patients and their families in terms of burden of care and responsibility. They concluded that nurse-led pre-operative assessment of patients with cataract at a peripheral ophthalmic clinic was safe, cost-effective and offered an improved level of satisfaction.

CRD COMMENTARY - Selection of comparators
A justification was given for the comparators used. You, as a user of this database, should consider whether these are appropriate comparators. The availability of peripheral clinics, trained ophthalmic nurses and the distances to main ophthalmic hospitals will almost certainly vary in different locations rendering the comparators irrelevant in some cases.

Validity of estimate of measure of benefit
The study was based on a randomised controlled trial and the follow-up was limited to 3 months. It might have been advisable to follow-up the patients for an extended period of time in order to assess the outcomes in the long-term.

Validity of estimate of costs
Insufficient details were provided of the nature of the costs included and were almost absent for group A. Reporting of more cost details would have been helpful.

Other issues
The cost data may not be generalisable to other settings or countries. Although this study is highly relevant to the NHS, unfortunately the reporting of the economic outcomes tended to be weak. This is not a cost-benefit study, but a cost-minimization study classified under the broad heading of cost-effectiveness analysis.

Implications of the study
The preferred model of care is the (experimental) model of nurse-led pre-operative assessment of patients with cataract at a peripheral ophthalmic clinic, and this is generally now in routine use.
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