Addressing shortfalls in TIA care in the UK: an economic perspective
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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 objective was to estimate the clinical outcomes and costs of rapid access to out-patient clinics for specialist assessment and treatment of patients after a transient ischaemic attack (TIA). The authors concluded that the intervention could prevent future strokes and result in cost savings for the UK health care system. The study methods were adequate, and they and the results were reported clearly. Given the scope of the study, the authors’ conclusions appear to be valid.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The objective was to estimate the clinical outcomes and costs of rapid access to out-patient clinics, for specialist assessment and treatment of patients after a transient ischaemic attack (TIA).

Interventions
The two interventions were usual care and revised care. For usual care, patients were generally referred for an out-patient appointment, and the treatment recommendations from this were faxed back to the referring primary care physician. For revised care, patients were sent directly to the out-patient clinic by the general practitioner (GP), without an appointment, and treatment was started immediately in the clinic.

Location/setting
UK/primary and outpatient secondary care.

Methods
Analytical approach:
A deterministic model was used to evaluate the two care options, for patients experiencing a TIA. The time horizon was one year. The authors reported that the UK NHS perspective was adopted.

Effectiveness data:
The clinical and effectiveness data were published estimates. The main effectiveness parameter was the 90-day recurrent stroke rate. These estimates were from two studies of a population cohort – the Oxford Vascular Study (OXVASC). One study provided the rate for usual care, and the other study, which was the Early use of Existing Preventative Strategies for Stroke (EXPRESS) study, provided the rate for revised care.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
The measure of benefit was the number of recurrent strokes within 90 days of the initial TIA.

Cost data:
The direct costs included medications, diagnostic tests, staffing, and the treatment of subsequent stroke. The costs of stroke treatment were from a study of the acute care costs incurred by patients in the OXVASC. The medication costs were from the British National Formulary. Staff levels for each intervention were based on guidelines and reports, and on the staff levels in the EXPRESS study. All costs were inflated to 2007 to 2008 prices, using the NHS hospital and
community health services inflation index. All costs were reported in UK £.

Analysis of uncertainty:
One-way sensitivity analyses were performed on the key model parameters including the TIA incidence, the referral rates, the subsequent stroke rate, the staffing level, and the costs of stroke treatment.

Results
For the whole of the UK, the total number of strokes was 15,868 with usual care and 7,704 with revised care; avoiding 8,164 strokes. The total costs for the UK were £133,314,918 with usual care and £107,668,223 with revised care. Revised care saved £25,646,695 per year.

Revised care was dominant over usual care, as it was more effective and less costly.

In the sensitivity analysis, the results were most sensitive to variations in the risk of subsequent stroke, the effectiveness of revised care in reducing subsequent stroke, and the incidence of TIA. The main findings were robust and cost savings were predicted, except with a high risk of recurrent stroke for revised care, and in an extreme scenario with a low rate of referral from the GP to the clinic, a high number of clinics, a low risk of recurrent stroke with usual care, a high risk of recurrent stroke with revised care, and extra facility costs for revised care.

Authors' conclusions
The authors concluded that the intervention with rapid access to treatment and assessment, for patients with a TIA, could prevent future strokes and result in cost savings for the UK health care system.

CRD commentary
Interventions:
The interventions were described and their selection appears to have been appropriate. The usual clinical practice was included.

Effectiveness/benefits:
The clinical and effectiveness data were from published studies. The main effectiveness estimate was the 90-day recurrent stroke rate, which was from two studies of the OXVASC data. This cohort study was not a clinical trial, so the internal validity of these data might be reduced by the lack of blind assessment and randomisation. The authors did not report whether a systematic review of the literature was undertaken to identify all the relevant evidence, making it impossible to ascertain whether all the relevant data were included. Quality-adjusted life-years might have been a more appropriate measure of benefit, to capture the impact of the interventions on quality of life, as well as allowing comparisons with other programmes.

Costs:
The perspective was explicitly reported to be that of the UK NHS and all the major relevant costs appear to have been included. The sources for the resource use and unit cost data were reported, and the unit costs and resource use were presented separately, enhancing the transparency of the analysis. The unit costs, absence of discounting, adjustment for inflation, and the price year were reported clearly.

Analysis and results:
A decision analysis was used to synthesise the cost and outcome information. Appropriate details of the model structure, including a diagram, were reported. An incremental approach was appropriately used to examine the difference between the interventions. The results were presented clearly. The impact of uncertainty on the model's results was tested in one-way sensitivity analyses, which go some way towards evaluating uncertainty, but a probabilistic sensitivity analysis could have assessed the overall model uncertainty. As the main limitation to their study, the authors reported that some parameters would need to be adjusted to accurately assess the local budget impact. A one-year time horizon might not have been adequate to capture the differences in the health benefit from the two interventions.

Concluding remarks:
The study methods were adequate, and they and the results were reported clearly. Given the scope of the study, the authors' conclusions appear to be valid.
Funding
Support received from GE Healthcare, UK.

Bibliographic details

PubMedID
19835525

DOI
10.3111/13696990903365000

Original Paper URL
http://informahealthcare.com/doi/abs/10.3111/13696990903365000

Indexing Status
Subject indexing assigned by NLM

MeSH
Ambulatory Care Facilities /economics /supply & distribution; Critical Pathways /economics; Great Britain; Humans; Ischemic Attack, Transient /complications /economics /therapy; Models, Economic; Practice Guidelines as Topic; Risk Factors; Secondary Prevention; Standard of Care /economics; Stroke /economics /etiology /prevention & control

AccessionNumber
22010000356

Date bibliographic record published
24/10/2012

Date abstract record published
25/01/2013