A study of long term economic consequences of short term stroke occupational therapy

Key findings

- Caution should be taken with economic evaluations of occupational therapy interventions when the sample size is not large enough to detect differences in economic costs or outcomes such as the EQ5D (Brooks 1996).
- Underpowered null results should not be used to make funding decisions, because they do not provide conclusive answers about the significance of a treatment effect.
- Occupational therapy is rarely delivered in isolation so the profession and researchers need to be wary of publishing economic evaluations of pure occupational therapy interventions.
- Caution needs to be taken when evaluating the specific additive effect of occupational therapy.
- Occupational therapists need to be able to undertake research as a measurable activity within their clinical practice.
- It is recommended that the emphasis for economic evaluations is at the intervention level and not a measure of the profession.
- Future trials which include occupational therapy interventions techniques should include an economic evaluation using methods that reflect the populations being studied and the complex interventions under investigation.
- Occupational therapy researchers need to work with health economists at the early stages of designing their research to make sure the correct methods are used.

Project aims

This project had two main objectives. The first was to explore whether we can prove that occupational therapy is cost effective for stroke patients and the second was to help occupational therapist understand the principals of health economic evaluations.

Specific aims were:

- To perform a structured review of the literature, summarize and discuss the economic evidence for occupational therapy stroke interventions.
- To design an analytic model using clinical outcomes as proxy measures of healthcare resource use and quality of life (QoL).
- Using the model aim to complete a cost-effectiveness analysis and cost-utility analysis of a published clinically effective occupational therapy intervention.
- Provide recommendations helping occupational therapists undertake economic evaluations.
- To publish the principals of this group of researchers to encourage other researchers to complete economic evaluations.

Background

Stroke causes long term functional limitations and although there is evidence that occupational therapy can improve independence, very little is known about its cost and cost-effectiveness.

There is a growing body of evidence that proves that occupational therapy interventions are clinically effective at treating people with stroke, enabling them to lead more active lives. The cost-effectiveness of such intervention is uncertain.
Methodology
A structured literature search was performed using several sources, years 1980-2010. Primary and secondary economic evaluations were included. The quality of the studies was assessed using a standard checklist for economic evaluations.

An analytic model was built using data obtained from an individual patient meta-analysis of occupational therapy which included data from 1,987 stroke patients. A group of expert occupational therapy researchers examined the outcome measures used in the studies to look for proxy measures of quality of life and resource use. An analytic model was built using the Barthel Index (Wade and Collin 1998) as a proxy measure of resource use and the General Health Questionnaire (Goldberg 1986) as a proxy measure of quality of life. This model was tested on data from one study which included 168 participants.

Results
There were no published economic evaluations of specific occupational therapy interventions for stroke patients. The search was widened to include multi-disciplinary rehabilitation interventions that included occupational therapy and 10 sources of primary and secondary economic evaluations were identified.

There is insufficient evidence at present to conclude whether occupational therapy interventions for stroke are cost-effective. An analytic model can be built which uses intermediate clinical outcomes to generate proxy economic outcomes for cost-effectiveness and cost-utility analyses; however such retrospective analyses can only be undertaken with limited information.

Conclusion
Occupational therapy has been proved to be clinically effective for stroke patients, however this study was unable to demonstrate through a literature review and analytic modelling whether the interventions are or are not cost-effective. Research occupational therapists and health economists need to work together in the future to make sure the correct methodology is applied to economic evaluations, that outcome measures are relevant to the intervention being evaluated and that care is taken when presenting economic evaluations of professions using poor methodology.

It is recommended that the British Journal of Occupational Therapy publish a series of papers to help researchers and clinicians understand economic evaluation language and methodology.

Publications


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References
