

Stroke rehabilitation:

A randomized controlled study in the home setting;

Functioning and costs.

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av

Ann Björkdahl

This thesis is based on the following four papers:

- I** A Björkdahl, Å Lundgren Nilsson, K Stibrant Sunnerhagen
The structural properties of the European Brain Injury Questionnaire.
J Stroke Cer Disease 2004;13,122-128.
- II** A Björkdahl, Å Lundgren Nilsson, G Grimby, K Sunnerhagen
Does a short period of home rehabilitation facilitate functioning after stroke? A
randomised controlled trial.
Clin Rehab 2006;20:1038-1049.
- III** A Björkdahl, Å Lundgren Nilsson, K Stibrant Sunnerhagen
Can rehabilitation in the home setting reduce the burden of care for the next of
kin of stroke victims?
J Rehab Med 2007;39:27-32
- IV** A Björkdahl, K Stibrant Sunnerhagen
Process skill rather than motor skill seems to be a predictor of costs for a stroke
patient in working age; a longitudinal study with a 1 year follow up post
discharge.
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Fakultetsopponent

Docent Kerstin Hulter Åsberg, Uppsala Universitet

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Ann Björkdahl

Institute of Neuroscience and Physiology / Rehabilitation Medicine,
The Sahlgrenska Academy at Göteborg University, Göteborg, Sweden

ABSTRACT

Aim: The purpose of the thesis was to describe and evaluate different aspects of rehabilitation after discharge for persons of working age after stroke. Aims were to compare an approach of support, information and training in the home setting with ordinary outpatient rehabilitation at the clinic and to describe the costs and factors influencing the costs.

Method: Fifty-eight persons, median age 53 years (27-64), with a first occurrence of stroke, participated in a randomized controlled study following ordinary in-patient rehabilitation. They received 9 hours of training per week for 3 weeks after discharge either at home (home group, N=29) or at the day clinic (day clinic group, N=29). Blinded evaluations were made at discharge, 3 weeks, 3 months and 1 year post discharge. For outcome, the assessments targeted the different components of the ICF. The main outcome was activity, assessed with the Assessment of Motor and Process Skill (AMPS). Burden of care for the next-of-kin was investigated in the groups. Societal costs for having a stroke were estimated as well as the cost of the two interventions. Rasch analysis was performed on the European Brain Injury Questionnaire (EBIQ) to assess its reliability and validity for outcome evaluation.

Result: In the post acute phase most improvement occurred in activity. There seemed to be an earlier improvement on some measures for the home group. The costs of the home group were less than half of the costs of the day clinic group. The caregiver burden was quite high in this study on relatively mild strokes indicating that other aspects than neurological influence the burden. The process skill and presence of aphasia were found to be significantly affecting the length of stay and thereby the cost. The instrument EBIQ was found to be valid and reliable for evaluation.

Conclusion: Rehabilitation in the home setting seems to reduce burden of care and costs. Both rehabilitation programs could be recommended; however, further studies are needed to define patients who may specifically benefit from the home rehabilitation program. Needs may differ among younger and older persons which may explain the differences found in resource allocation.

Key words: rehabilitation, ADL, cost, home, caregiver, outcome, adaptation, occupational therapy