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Does a short period of rehabilitation in the home setting facilitate functioning after stroke? A randomized controlled trial

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Objective: To assess the effect of three weeks of rehabilitation in the home setting for younger patients with stroke with the aim of improving activity level.
Design: A randomized controlled study with blinded evaluations at discharge, three weeks, three months and one year after discharge.
Setting: Home of the patient or the ordinary day rehabilitation clinic at the university hospital.
Subjects: Fifty-eight patients (median age 53 years) consecutively discharged from inpatient rehabilitation with a first occurrence of stroke participated in training directly after discharge.
Intervention: Rehabilitation was given for 9 hours/week over three weeks. The home group received individually tailored training, based on the patient's needs and desires, with a focus on activities in their natural context. Support and information were also given. The intervention in the day clinic group was aimed mainly at improved functions.
Main measures: The main outcome was activity, assessed with the Assessment of Motor and Process Skill (AMPS). The impairment level was also evaluated. Costs were estimated.
Result: There were no significant differences between the groups on any of the four assessments. However, there seemed to be an earlier improvement on some measures (including AMPS) for the home group. For both groups there was a greater improvement on the activity level than on the impairment level. The costs of the home group were less than half of the costs of the day clinic group.
Conclusion: With the present results, both rehabilitation programmes could be recommended, however, further studies are needed to define patients who may specifically benefit from the home rehabilitation programme. Costs should be taken into consideration.

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Introduction

Given the fact that stroke is one of the most disabling chronic diseases, it is crucial to evaluate the most effective, efficient and acceptable methods of managing stroke rehabilitation. There is evidence today that stroke unit care in the acute and subacute phase is superior to ordinary inpatient care.[1] Although most motor and functional recovery occurs in the first three months after stroke,[2] there also seems to be evidence for the effectiveness of rehabilitation in the postacute phase.[3,4] Because of the array of different programmes and different outcome measures used in the postacute phase it has been difficult to compare the different ways of managing rehabilitation.

After the period of natural recovery, the issues for stroke outcome are related to the patient's return to usual activities and overall quality of life.[5,6] It is important for stroke survivors to be able to return to valued activities in the home or in the community.[7] Evidence of the effectiveness of home-based stroke rehabilitation has recently become available from randomized controlled trials,[4,8–11] but in most trials the focus has been on shortening the incare period. In an early trial comparing domiciliary and day-hospital care, Gladman and Lincoln[12] found no overall difference between the services at six months, but home therapy was better than outpatient department therapy at improving household ability and leisure activity in the patients discharged from the stroke unit, and the younger stroke patients appeared to do better with home therapy.

Discharge from hospital is a critical stage in the rehabilitation of patients with stroke and continuity is of great importance for the efficacy of the rehabilitation process.[9] Training has often been shown to be specific. The skills achieved in hospital may be difficult to transfer to the home environment.[13–15] In order to overcome these difficulties new approaches to guidance in the home setting might be a way to gain better long-term outcomes.

Information given to patients and those close to them seems to improve outcomes.[16] In a study from the UK, caregiver training resulted in both better outcomes and lower costs.[17] Home physiotherapy has also been shown to be cost-effective compared with day hospital for stroke patients.[18] No studies regarding the cost-effectiveness of other types of intervention in the home setting have been found.

The overall aim of the present study was to evaluate if three weeks of rehabilitation in the home setting of younger patients with stroke would improve activity to a larger extent than ordinary outpatient rehabilitation at the clinic and facilitate the rehabilitation process. The intervention aimed to give support, information and training by both occupational therapists and physiotherapists in the home setting to transfer skills achieved in hospital into the home environment. A second aim was to describe the costs associated with the interventions.

Methods and material

Patients

Patients ($n = 109$) admitted consecutively with a first occurrence of stroke to the rehabilitation department, Sahlgrenska University Hospital, and discharged to their own home ($n = 90$), were asked to participate in a randomized controlled study with two groups (Figure 1). Fifty-nine patients were included and participated after informed consent, from January 1998 to December 2001. To avoid affecting the length of stay, randomization occurred a week before discharge, using sealed envelopes. Thirty patients were randomized to the home group and 29 patients to the day clinic group (Table 1). One-third of the available patients declined the offer to participate in the study (Figure 1). Data on these patients, collected as part of the clinical routine, were used for comparison of outcome, with those attending the intervention directly after discharge either at the day clinic or at home. The Ethics Committee at Göteborg University approved of the study.

Intervention

The patients received 9 hours of training per week for three weeks, which is consistent with what was usually offered at the day clinic at that time, either at home (home group) or at the clinic (day clinic group) after discharge from the rehabilitation ward. In the home group family or friends and helpers were involved and information was given to them and the patient about the stroke, its consequences and how to deal

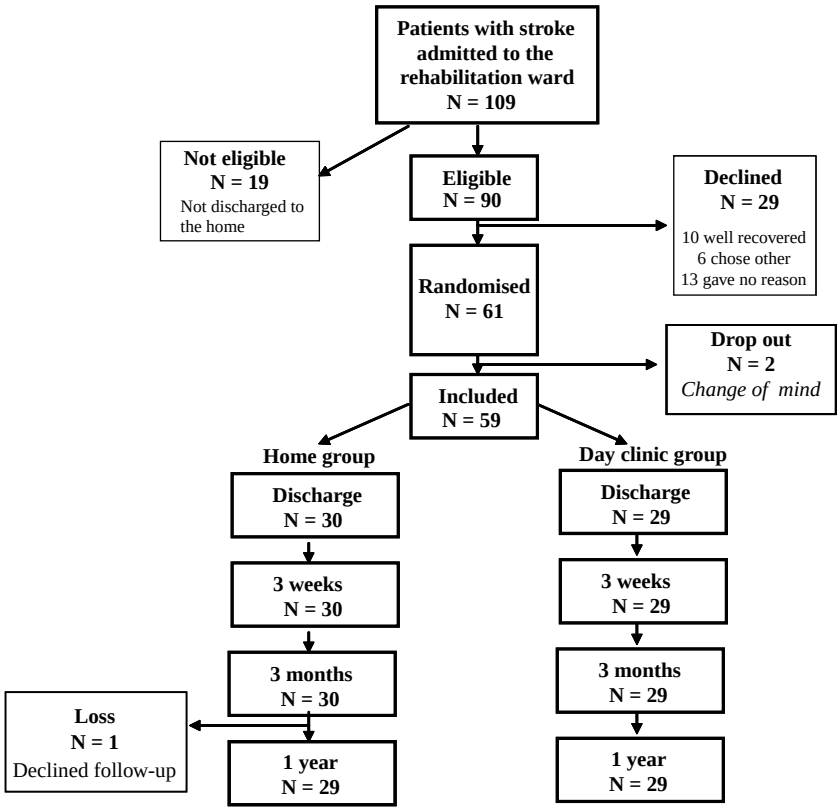

Figure 1 Flowchart of the eligible patients.

Table 1 Characteristics of the two groups

	Home group ($N = 30$)	Day clinic group ($N = 29$)	Total ($N = 59$)
Median age, years (range)	52 (28–61)	55 (27–64)	53 (27–64)
Men	22	22	44
Women	8	7	15
Intracerebral haemorrhage	10	8	18
Intracerebral infarction	20	16	36
Cerebellar haemorrhage	0	3	3
Cerebellar infaction	0	2	2
Left hemisphere lesion	19	9	28
Right hemisphere lesion	11	16	27
Bilateral lesion	0	4	4
Single	12	15	27
Cohabitant	18	14	32
Time in acute care, mean days (range)	27 (9–58)	30 (7–70)	29 (7–70)
Number in stroke unit	17	21	38
Number in other ward	13	8	21
Time in rehab unit, mean days (range)	66 (24–155)	61 (20–134)	63 (20–155)

When not stated otherwise, numbers are given.

with them. An occupational therapist and a physiotherapist offered individually tailored training, based on the patient's needs and desires and with focus on activities in their natural context, a top-down approach. The content varied from personal care to shopping and trying out leisure activities. Since the training was taking place in the environment of the patient and according to needs at that specific day, no specific training equipment was used. A multiprofessional team offered training at the day clinic. The focus of the intervention in the day clinic group was more a bottom-up approach that focused on the training of deficits or components of function (impairment) in order to generate better ability to perform daily life activities. After the intervention period, all patients in both groups followed the ordinary rehabilitation process and most of them attended at least one period (six weeks, three days/week) of outpatient rehabilitation at the clinic during the first year, which also was the case for most non-participants.

Instruments

The Assessment of Motor and Process Skills (AMPS)[19] was chosen as the main outcome. The Assessment of Motor and Process Skills is an observational measure of functional competence in instrumental activities of daily living (IADL) tasks and assesses those aspects of functioning that are essential for people to live independently in the community and therefore suitable for the purpose. As complement for the evaluation of the activity level, a 30-m walking test was performed,[20] the Functional Independence Measure (FIM)[21,22] and the Instrumental Activity Measure (IAM)[23] were also used. The National Institutes of Health Stroke Scale (NIHSS)[24] and Barrow Neurological Institute Screening for higher cerebral functions (BNIS)[25] were used to examine body functions.

Assessment of Motor and Process Skills

The Assessment of Motor and Process Skills is a standardized assessment of occupational performance used to observe and evaluate a person's ability to perform personal and IADL.[19] It measures the quality of a person's performance during ADL tasks by evaluating 16 ADL motor skills and 20 ADL process skills. A trained and calibrated rater scores the performance of two to three tasks. The raw scores are analysed using many-faceted Rasch analysis[26] to provide linear motor and process skill ability measures expressed as logistically transformed probability measures (logits).[27,28] A cut-off criterion for a person's ability to remain in independent living is set at 2.0 logits for the motor skill scale and at 1.0 for the process skill scale.[19,29] The Assessment of Motor and Process Skills is validated for use in Sweden.[30] Several studies of the psychometric properties of the AMPS in different populations and settings suggest that it is well suited to clinical and research applications.[31–34]

Functional Independence Measure

The Functional Independence Measure consists of 13 motor (physical) items and five social-cognitive items,[35] assessing dependence with ratings from 1 as totally dependent to 7 as independent.[22] The Functional Independence Measure has been validated[36,37] and examined for use in Sweden.[38]

Instrumental Activity Measure

The Instrumental Activity Measure consists of eight items assessing dependence in everyday activities for people living in the community, such as home care activities and transportation. The rating of the items follows a form similar to that of the Functional Independence Measure, with an ordinal seven-step scale.[23]

Thirty-metre walking test

In the 30-m walking test the person is requested to walk indoors at his or her own speed and the velocity is recorded (m/s).[20]

National Institutes of Health Stroke Scale

The National Institutes of Health Stroke Scale is a quantitative measure of neurological deficit. All items are summed with a maximum score of 36. The lower the score, the less the deficit.[24]

Barrow Neurological Institute Screening for higher cerebral functions

Barrow Neurological Institute Screening for higher cerebral functions is a screening of cognitive functions consisting of 30 different items, grouped together into seven clinically relevant factors. The

total maximum score is 50. A high score indicates better function and a score above 47 is considered normal.[25] The Swedish version is validated for use in Sweden.[39]

Assessments

Blinded assessors made all evaluations at discharge and after the intervention at three weeks as well as at additional follow-ups at three months and one year after discharge. All instruments were used on all occasions except for the assessment after the intervention, at three weeks, when only the activity measures – the Assessment of Motor and Process Skills, Functional Independence Measure and the Instrumental Activity Measure – were performed. The assessments by the assessing occupational therapist were performed in the patient's home. At the clinic, the relevant professionals assessed the National Institutes of Health Stroke Scale, the Barrow Neurological Institute Screening for higher cerebral functions and the 30-m walking test. The blinding was performed by informing the subject not to comment on training (how and where). Information on randomization was kept in storage by the person allocating to the groups until the study was finished.

Costs

The medical costs for rehabilitation during the three weeks of intervention were calculated based on both groups receiving 9 hours of treatment per week. All costs were based on 2004 prices and in neither programme were costs for physicians included. The costs for the home group were based on an occupational therapist/physiotherapist mean salary per hour including social benefits and travelling costs. The salary cost per hour was 25 euros. On average the weekly 9 hours of intervention in the home group occurred during four occasions in the patient's home per week, either by the occupational therapist or the physiotherapist. Travelling costs were, therefore, based on four occasions/week, by car on average 15 km one way, reimbursed at 0.18 euro/km, according to recommendations by the Swedish authorities. Travelling time was estimated to be on average 1 hour each way including parking and transportation of therapist and materials to the building. To cover overhead costs and time for documentation we added one day cost at the day clinic for the home group. The cost for rehabilitation at the day clinic has been estimated to be 490 euros/day by the economic department at the hospital. The calculations of the costs for the day clinic group are based on three visits to the clinic per week (Table 2).

Analyses

A power analysis was undertaken after acquiring data from the first 20 participants on the main outcome measure (Assessment of Motor and Process Skills). We aimed to detect a significant difference of 0.05 (using Student's *t*-test) between the groups of 0.5 logits (considered a clinically relevant difference)[19,27] after the intervention period in the process skill scale and 25 people in each group yielded a power of 80%.

To obtain linear measures, Winsteps software was used to conduct Rasch model analyses of the Functional Independence Measure and the Instrumental Activity Measure.[40] The Rasch analysis was made as one analysis for all data from all occasions with the assumption that items stay stable over time as shown for the Functional Independence Measure[35] and for evaluations of group differences, results in logits are used. However, in Table 3 data are given both as logits and sum scores to make them easier to understand for the ordinary user of these instruments.

The Mann–Whitney *U*-test and Student's *t*-test were used for group evaluations of differences between the groups at the different occasions of assessment. To examine the process of change over time for each of the groups, the sign test was used for ordinal data and the paired *t*-test for interval data. The significance level was set at $P < 0.01$ in order to avoid mass significance. To analyse the interaction between time and group, data on the Assessment of Motor and Process Skills were analysed and illustrated by Kaplan–Meier survival curves (Figure 2). The Kaplan–Meier curves give information on when in time the critical level of change (for AMPS 0.5 logits) occurs for individual patients. This analysis requires a cut-off criterion or criteria for clinical relevance. The Assessment of Motor and Process Skills fulfilled this requirement (as well as being the main instrument) and was thus suitable for this analysis.

Analysis was based on an intention-to-treat basis. Data were examined for changes during the

Table 2 Cost in euros per patient in the two intervention programmes

		Number of times	Home group €	Day clinic group €
OT/PT salary	27 hours @ 25€		675	
Travelling time OT/PT	2 hours @ 25€	12	600	
Travelling cost by car	30 km @ 0.18€	12	65	
Overhead cost	490€	1	490	
Day cost at clinic	490€	9		4410
Total cost (€)			1830	4410

intervention, from the end of intervention to three-month follow-up and between the follow-up at three months and one year. An examination of the whole period from discharge to the one-year follow-up was also performed.

Analysis of non-participants

There were clinically collected data on the Functional Independence Measure and the National Institutes of Health Stroke Scale at discharge for the non-participants ($N = 29$) that were used for comparisons. The comparisons were made in order to examine for eventual differences between the non-participants and the other two groups at discharge, which could explain the non-participation. To examine for differences between participants and non-participants at the one-year follow-up the 12 first non-participants were approached and 11 agreed to be assessed with the Assessment of Motor and Process Skills, the Functional Independence Measure, the Instrumental Activity Measure and the 30-m walking test.

Results

The patients in the home group and the day clinic group did not differ significantly at discharge concerning age, gender, lateralization, proportion of haemorrhages and infarcts, or in the results from any of the instruments used. The sample of stroke patients was representative for this age group in Sweden.[41] The remaining impact of the stroke at discharge was quite low with a median of

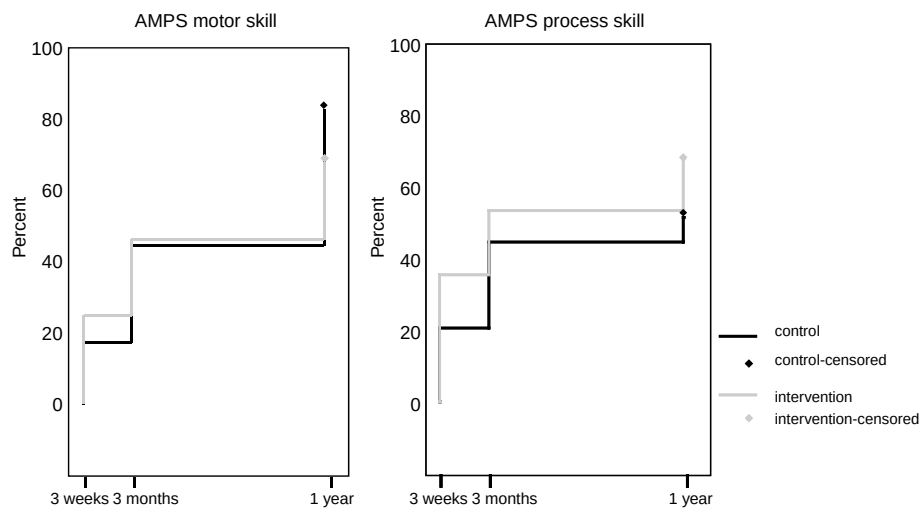

Figure 2 The curve illustrates the interaction between time and group on the Assessment of Motor and Process Skill (AMPS) motor skill scale and the AMPS process skill scale. The *y*-axis shows the percentage of the sample that has obtained a positive change of 0.5 logits, at the time point indicated on the *x*-axis. Censored indicates how many per cent that have made this change at the last assessment.

Table 3 Means and standard deviations for the instruments with interval scale and medians and 25th and 75th percentiles for the instruments with ordinal scale

Instrument	Assessment	Home group			Day clinic group		
Interval scale		*N*	Mean	SD	*N*	Mean	SD
AMPS Motor (logits) Cut-off 2.0	Discharge	30	1.45	0.99	29	1.42	0.76
	3 weeks	29	1.71	0.91	29	1.52	0.71
	3 months	28	2.02	1.08	29	1.88	0.78
	1 year	28	2.18	1.04	29	2.28	0.94
AMPS Process (logits) Cut-off 1.0	Discharge	30	1.00	0.73	29	1.18	0.57
	3 weeks	29	1.26	0.75	29	1.37	0.53
	3 months	28	1.23	0.64	29	1.54	0.53
	1 year	28	1.55	0.76	29	1.59	0.68
FIM motor (logits)	Discharge	31	2.44	2.08	30	2.38	1.70
	3 weeks	30	2..83	2.05	29	2.38	1.70
	3 months	30	3.22	2.12	29	2.86	1.90
	1 year	29	3.14	2.07	29	2.99	1.76
FIM social-cognitive (logits)	Discharge	31	2.32	1.65	30	2.43	1.57
	3 weeks	30	2.62	1.85	29	2.94	1.57
	3 months	30	2.65	1.70	29	3.04	1.48
	1 year	29	2.68	1.67	29	3.29	1.50
IAM (logits)	Discharge	30	−0.18	1.66	29	−0.32	1.10
	3 weeks	30	0.29	1.35	29	0.08	0.99
	3 months	30	0.54	1.47	29	0.59	1.20
	1 year	29	0.70	1.63	29	1.05	1.76
30-m walking (m/s)	Discharge	25	0.70	0.33	26	0.84	0.46
	3 months	24	0.90	0.32	28	0.93	0.43
	1 year	26	0.94	0.33	27	0.98	0.39
Ordinal scale		*N*	Median	25th and 75th percentile	*N*	Median	25th and 75th percentile
NIHSS sum score (max 36)	Discharge	28	5	2–7	28	4.5	2–6
	3 months	27	4	2–6	26	3	1–5
	1 year	27	3	2–5	28	2.5	1–4
BNIS sum score (max 50)	Discharge	18	40	37–44	24	42	37–45
	3 months	19	40	34–44	25	42	40–45
	1 year	19	42	38–46	25	43	39–46
FIM motor sum score (max 91)	Discharge	31	78	74–85	30	80	74–85
	3 weeks	30	81	77–89	29	81	77–89
	3 months	30	83	79–90	29	83	79–90
	1 year	29	83	79–90	29	83	79–90
FIM social-cognitive sum score (max 35)	Discharge	31	31	25–33	30	30.5	27–34
	3 weeks	30	31.5	25–34	29	33	28–34
	3 months	30	32	27–34	29	33	30–34
	1 year	29	32	28–34	29	33	30–35

AMPS, Assessment of Motor and Process Skill; FIM, Functional Independence Measure; IAM, Instrumental Activity Measure; NIHSS, National Institutes of Health Stroke Scale; BNIS, Barrow Neurological Institute Screening for higher cerebral functions; SD, standard deviation.

5 on the National Institutes of Health Stroke Scale (the lower score the better) and with a median of 78 on the Functional Independence Measure motor sum score (total independence 91) (Table 3).

When comparing the groups at the different occasions, there were no significant differences between the groups either after the intervention or at follow-up, on any of the instruments used. Both groups improved significantly from discharge to the one-year follow-up, on the Assessment of Motor and Process Skills two scales, the motor skill and the process skill, the Instrumental Activity Measure, as well as the 30-m walking test. Only the day clinic group changed significantly on the Functional Independence Measure, motor scale and social/cognitive scale. The instruments on impairment level, the National Institutes of Health Stroke Scale and Barrow Neurological Institute Screening for higher cerebral functions, did not change significantly for either group.

Improvement appeared at different times, as assessed by the Assessment of Motor and Process Skills, when examining the groups separately. The home group improved significantly on the AMPS motor skill scale from the start to the end of the intervention at three weeks while the day clinic group did not change significantly during the intervention. From the end of the intervention to the three-month follow-up, both the home group and the day clinic group had significant improvements and the day clinic group also improved significantly between the three-months and the one-year follow-up. Similarly to the motor scale, only the home group improved significantly on the AMPS process skill scale during the intervention. The home group also improved significantly between follow-up at three months and one year. The day clinic group only had a significant improvement when looking from discharge to one-year follow-up. The Kaplan–Meier curves (Figure 2) illustrate this interaction between time and group and picture when there is an improvement for the individual patient of >0.5 logits, which is statistically significant and clinically relevant. On both AMPS scales a higher percentage of the patients in the home group than in the day clinic group reach the critical level of change at the end of the intervention. However, the groups are quite small and the difference between the groups was not significant at any occasion.

After the intervention, the Instrumental Activity Measure and the Functional Independence Measure were also assessed and the only significant improvement on these instruments at that time was on the Instrumental Activity Measure for the home group. The next assessment on the Instrumental Activity Measure at three months showed significant improvements for both groups and between the three-months and one-year assessments both groups improved significantly. The dependence in personal care and transfer on the Functional Independence Measure motor scale only was significantly changed between three months and one year for the day clinic group. The Functional Independence Measure social-cognitive scale only changed significantly for the day clinic group from discharge to one-year follow-up.

The 30-m walking test, which also measures the activity level, improved significantly for both groups from discharge to the three-month follow-up as well as for the whole follow-up period. There were less significant improvements on the instruments measuring impairment level for both groups. On Barrow Neurological Institute Screening for higher cerebral functions neither of the groups improved significantly and the only significant improvement on the National Institutes of Health Stroke Scale was for the day clinic group from discharge to the three-month follow-up.

Non-participants

The non-participants had significantly less neurological deficit (the National Institutes of Health Stroke Scale) and higher ability (the Functional Independence Measure) at discharge than the participants. At the one-year follow-up there were no significant differences compared with the participants on the Functional Independence Measure, Instrumental Activity Measure, Assessment of Motor and Process Skills or the 30-m walking test.

Cost

In both programmes the patients received 27 hours of intervention during the three weeks. The number of times varied as at the day clinic the patient visited both the occupational therapist and the physiotherapist the same day, but in the home group there could be visits by the occupational

therapist and the physiotherapist on different days. The total cost for the home group was 1830 euros and the total cost for the day clinic group was 4410 euros (Table 2). This makes a difference between the groups of 2580 euros. The costs of the home group were less than half (42%) of the costs for the day clinic group.

Discussion

In this study we were not able to show any significant differences in improvement in activity between the two groups. However, there were indications of earlier improvement in the home group. Furthermore there was a marked difference in costs with lower costs in the home group.

The main emphasis of training in the home group was on giving information and support in doing everyday activities. The day clinic group did not get any guidance at home, which may be one possible explanation for the slower improvement in this group. The intervention period was set at three weeks because an aim for the study was to analyse whether a short period of task-oriented training in the home setting would facilitate the rehabilitation process. With an intervention aiming at different activities and on informing patients and those close to them about the consequences of the stroke and how to handle them, this may be an appropriate length of time. For training new skills and how to adapt to the new situation, a longer time may be needed. After the three-week period, almost all patients were referred, by their regular rehab physician, for day rehab since they were considered to be in need of further rehabilitation according to the current practice at the clinic. This is one of several factors that might contribute to the improvement during the first year, but is also a confounding factor.

The Cochrane review of outpatient rehabilitation[4] shows clear evidence for the effect of rehabilitation during the first year after the stroke and our results are consistent with that conclusion and the tendency to earlier improvement in the home group might be consistent with the findings of Clark et al.[16] that information to patients and those close to them improves outcomes.

After the intervention, the home group had significant improvements on three of the five scales assessed, compared with none of five for the day clinic group. The Kaplan–Meier curves of the Assessment of Motor and Process Skills (Figure 2) also show that the home group improved earlier. If we can assume from this that the home training is at least as good as the training at the day clinic, it would be of interest to explore whether one of the two is more favourable for a certain subgroup. However, this material is not large enough for such analysis since this was not an aim from the beginning.

The group of non-participants did not differ from the participants at the one-year follow-up in spite of being better at discharge from the rehabilitation unit. An explanation for this could be that with time most patients improve and adapt to the situation and reach a similar level. In that case a potential advantage with the home programme could be if the intervention speeds up the process.

In the present study, the changes of body function and activity differed, as there were significant improvements on the activity level but not at the level of body function in accordance with such a difference in previous studies.[42] The study population was well recovered at discharge from the rehabilitation unit as can be seen on the National Institutes of Health Stroke Scale, median 5 and the Functional Independence Measure motor scale, median 78 (Table 3). In the present subacute setting, most of the improvement of function may already have occurred; therefore most improvement that can be expected will be in activity. However, on the activity measure, the Functional Independence Measure, there were few significant changes, probably due to a ceiling effect.

Rehabilitation after stroke often relies on the training of task-oriented strategies.[43] In the intervention at home the aims of both physiotherapist and occupational therapist were to teach the patients to use the restored and intact body and mental functions as well as using different strategies when needed to be able to perform meaningful activities. That programme may, therefore, be more specifically task-oriented than what is possible to achieve at the day clinic. In addition, the home group performed the activities in their natural context, which is important, as functioning is an

Clinical messages

- In a rehabilitation facility, rehabilitation in the home setting should be offered as an alternative to ordinary day rehabilitation.
- Whether the training reduces the strain of the family is not clear from this study, but others have shown positive effects.
- Training in the home setting seems to be cost efficient.

interaction between a person's physical or mental condition and his or her social and physical environment.[11]

Limitations of the present study include a rather small group of patients with heterogeneous diagnoses of stroke (i.e. cortical as well as deep structures and cerebellum). This, along with the number of participants, means that we cannot perform subgroup analysis. Also, as a result of a change in policy that we could not control, the number of patients that went to an intermediate living situation before return to home suddenly increased when the study started. The design in which two good alternatives are compared requires more differences than comparing treatment to no treatment.

In summary, the programme in the home group seems as good as or better than the day clinic programme and the costs associated with the two programmes speak in favour of the home programme. Roderick *et al.*[44] also found their two programmes equally good and pointed out that a potential advantage of domiciliary rehabilitation could be the greater involvement of the informal caregivers with rehabilitation in the place where the patient spends the most time. Thus the exploration of other aspects, such as caregiver strain, self-confidence and well-being, will be of interest in future studies.

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Rehabilitation Omniana

Reading upside-down

The patient had made a good recovery from his left hemisphere cerebral infarction (stroke) when he came back to my follow-up clinic. I checked his visual fields, and he still had a right hemianopia that had been present from the outset. During our conversation he mentioned that his right hemianopia had been very troublesome for some time. He had found reading difficult because he could not look into his blind hemi-field to find the next word. However he then said that he could now read easily. On further questioning he told me how. He simply turned written material upside-down, so that he was reading into the sighted left hemi-field. This, he informed me, had some advantages – and he proceeded to read the letter in the notes that were in front of him, but facing me! I have since told at least one other patient about this trick, and he was extremely pleased when I next saw him because he too had learned to read and could enjoy books again.

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