

Effectiveness of Occupational Therapy at Home E-Rehabilitation for Persons post-stroke for Supporting Daily Functioning: A Stepped Wedge Cluster Randomized Controlled Trial

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Background

- Transitioning to home after stroke is challenging and often leaves individuals unprepared for self-management and daily functioning.
- Post-stroke individuals are less physically active and more sedentary at home than during rehabilitation.
- E-rehabilitation may offer a cost-effective solution for home-based geriatric rehabilitation.

Occupational Therapy at Home E-Rehabilitation for Persons post-stroke (OTHER) intervention

Inpatient GR – three weeks before discharge
Start OTHER

transition
to home

12 weeks OTHER at home
max. 10 sessions OT

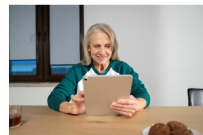


Coaching

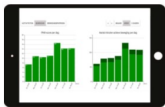


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Hipper



At home & online



Aim OTHER: Improve daily functioning and self management

Supported by a grant from ZonMw (the Netherlands Organisation for Health Research and Development)

Creating Tomorrow



Aim

To evaluate the (cost-)effectiveness of OTHER compared with usual care on self-perceived performance in daily activities in community-dwelling older adults post-stroke over 24 weeks.

Design

- A (Partially) randomised stepped-wedge trial was used.
- Every cluster started with care as usual, and after 3 months, one cluster got 2 days of training on OTHER. After that, only recruitment of OTHER.
- Recruitment: March 2023 – July 2025.
- A total of 9 geriatric rehabilitation centres and 2 hospitals (NL) participated (2 centres and 2 hospitals were added after one year of enrolment).

Table 1: Design of the OTHER two-armed stepped-wedge trial

Clusters of GR centres and hospitals	Steps (months)									
	1-3	3-6	6-9	9-12	12-15	15-18**	18-21**	21-24**	24-27**	
1. GR centres A and B	C	I	I	I	I	I	I	I	I	
2. GR centre C	C	C	I	I	I	I	I	I	I	
3. GR centres D and E	C	C	C	I	I	I	I	I	I	
4. GR centre F	C	C	C	C	I	I	I	I	I	
5. GR centre G	C	C	C	C	C	I	I	I	I	
6** GR centres H and I						C	C	I	I	
7** Hospital A						C	C	I	I	
8** Hospital B						C	C	C	I	

C= Care as usual, I = OTHER intervention GR = Geriatric Rehabilitation

Trial duration = 18 months (recruitment), 24 months (treatment and measurements) **recruitment extension period of 9 months after evaluation, with 27 months for inclusion.

Pre-rollout period = 3 months. Rollout period = 21 months. Post-rollout period = 6 months.

Step length = 3 months.

Participants

Community-dwelling persons post-stroke admitted for inpatient rehabilitation or discharged from the hospital.

Inclusion criteria

- ≥ 60 years
- Able to walk a few steps (with or without aid)
- MoCA ≥ 16
- Indication for follow-up home-based geriatric rehabilitation

Exclusion criteria

- Terminal illness
- Inability to understand verbal instructions (e.g. severe aphasia)

Outcomes & measurements

Primary: self-perceived daily performance (COPM)

Secondary: performance satisfaction (COPM), self-management and OT satisfaction (PROM-OT), quality of life (EQ-5D-5L), mobility (TUG), and societal costs (questionnaire)

Assessed at baseline, 13 and 26 weeks post-discharge.

Trail status

- 121 participants enrolled
- Data collection completed February → analyses underway
- Process evaluation conducted using mixed-methods in line with MRC guidance.