

Life after stroke: recovery at home

Researching a socially and economically sustainable home and community model for stroke recovery

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The scale of life after stroke

Nearly 10 million people in Europe live with the long-term effects of stroke. More than 1.1 million strokes occur each year.

Hemiparesis or hemiplegia can affect the arm and hand, leg and foot on one side. This can limit walking, balance, reaching, grasping and everyday activities.

Around 40% of people experience persistent loss of arm function after stroke.

The impact can reach beyond movement, affecting independence, choice, participation and family life.

Across 32 European countries, stroke's total societal cost was estimated at €60 billion in 2017, including health and social care, unpaid family care and lost productivity.

The chronic phase is not the end of recovery

We focus on people more than six months after stroke who continue to have mobility goals and unmet support needs.

“Chronic” describes time since stroke. It does not mean that recovery has ended.

Progress is usually fastest in the early months, but some people continue to improve later. Access to ongoing, goal-directed support varies across services and countries.

Can accessible practice at home help people keep working towards the activities that matter to them?

If better mobility supports greater autonomy and quality of life, it may also ease the social and economic burden on families and services.

From movement to a better quality of life

We aim to improve quality of life by helping people make functional gains in lower-limb mobility and upper-limb activity.

The project will study whether those gains can support meaningful everyday tasks, greater autonomy and participation in community life.

We will co-design and evaluate the pathway with stroke survivors, families and clinical partners across different European settings.

Our research question is how, for whom and under what service conditions continued support at home can make a meaningful difference.

We will assess the feasibility and cost of home delivery—including devices, training and clinical follow-up—against potential gains in function, quality of life and care needs.

A person-centred pathway at home

One coordinated home and community pathway will be tailored to each person's goals, abilities and living context.

Lower-limb track: walking practice, balance and everyday mobility.

Upper-limb track: arm and hand use in daily tasks such as dressing, reaching and preparing food.

Assistive technologies may support either track when appropriate, alongside clinician follow-up, caregiver guidance and links to community services.

The model will adapt to progress, barriers and each person's preferences.

What we want to learn

Movement and function: walking, balance, arm use, safety and usability.

Everyday life: daily activities, autonomy, participation and quality of life.

People around the participant: caregiver experience and support needs.

Services and implementation: access, feasibility, equity, resource use and cost.

The measures and study design will be agreed with clinical researchers and people with lived experience.

Profiles of partners we are seeking

Clinical coordinator: a recognised university hospital or research institution with stroke and neurorehabilitation expertise, experience leading multi-site studies and the capacity to coordinate scientific design, governance and clinical delivery.

Clinical sites: stroke and neurorehabilitation centres able to recruit participants and deliver or supervise home-based pathways.

People with lived experience: stroke survivors, families and representative organisations involved in co-design, governance and interpretation.

SSH and community-service partners: expertise in lived experience, barriers, accessibility, choice, participation and care pathways.

Health economics and implementation: expertise in resource use, cost, affordability and adoption across services.

Technology partners: assistive and digital tools matched to different functional needs.

Examples of partners to explore

Potential clinical coordinators: Vall d'Hebron, Hospital de Sant Pau, Germans Trias i Pujol and CHU de Montpellier.

Clinical and rehabilitation sites: Spain: Institut Guttmann, Hospital Gregorio Marañón, Hospital La Fe and Irenea. France: CHU de Nîmes. Belgium: UZ Gent and Hôpital Universitaire de Mons. UK: Hobbs Rehabilitation and NRC. Germany: Kliniken Schmieder. Italy: Fondazione Don Gnocchi.

People with lived experience and families: Fundació Ictus and Schlaganfall Landesverband Niedersachsen e.V.

Technology and research: Robopedics (lower limb), Vilje Bionics (upper limb) and Eodyne (digital stroke rehabilitation).

All examples are exploratory. No participation is confirmed.

Executive summary

The challenge: Many stroke survivors live with persistent arm and leg mobility limitations and unmet support needs beyond the early rehabilitation phase.

Our ambition: Make person-centred recovery support accessible at home and in the community, including for people more than six months after stroke.

Our approach: Co-design and study a clinically supported pathway combining suitable technologies, meaningful daily practice and professional follow-up.

The evidence: Evaluate mobility, autonomy, quality of life, caregiver needs, implementation feasibility and cost across European settings.

Partners sought: A clinical coordinator and sites, people with lived experience, SSH and health-economics expertise, and technology partners.