

# ReTrain

## Background

Each year approximately 110,000 people suffer a stroke, the third largest cause of death and the leading cause of disability in adults in the UK. The most common form, Ischaemic stroke, is caused by a blood clot narrowing or blocking blood vessels so that blood cannot reach the brain, resulting in brain damage. Of the 900,000 people in the UK who have suffered a stroke 300,000 live with moderate to severe disability.

Due to the long-term impact strokes have on patients, their family and carers, offering continuing support needs to be a priority.

## Method

The ReTrain (Rehabilitation Training) project was designed following a question raised by a stroke survivor taking part in the PenCLAHRC question generation process. Over a period of four years a group of stroke survivors and their partners advised us on a range of developmental projects. This work resulted in research funding from the [Stroke Association \(https://www.stroke.org.uk/\)](https://www.stroke.org.uk/) to conduct a pilot randomised controlled trial to test whether ReTrain can help support stroke survivors in their ongoing recovery after discharge from NHS rehabilitation services.

The ReTrain programme is a combination of expert guidelines together with key elements of an approach called [ARNI \(http://www.arni.uk.com/\)](http://www.arni.uk.com/) (Action for Rehabilitation of Neurological Injury).

Through conducting the ReTrain pilot trial, we were able to see whether it was feasible to design and carry out a larger trial as a test of whether ReTrain could improve the lives of stroke survivors. The overall aim of our programme of research was to find out whether ReTrain could help stroke survivors to improve their recovery, particularly their physical mobility and so enable stroke support organisations to decide whether to offer ReTrain programmes. It was also hoped to help stroke survivors decide whether they wanted to take part in the programme.

For more information about the trial, please contact [Dr Raff Calitri \(mailto:r.calitri@exeter.ac.uk\)](mailto:r.calitri@exeter.ac.uk)

## Preliminary work

We were able to design this pilot trial after completing a range of development work.

We conducted a range of development studies to build a case for a clinical trial of ARNI. These included:

- A case series, in which six long-term stroke survivors were provided with one-to-one ARNI-based training by an Exercise Professional. This work was published and [the paper can be found here \(http://www.biomedcentral.com/1756-0500/6/324\)](http://www.biomedcentral.com/1756-0500/6/324).
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- Investigating the rationale for providing and intervention like ARNI, including a [review of current guidelines \(http://www.implementationscience.com/content/8/1/115/abstract\)](http://www.implementationscience.com/content/8/1/115/abstract) on exercise-based rehabilitation after stroke.
- A qualitative study (<http://www.ncbi.nlm.nih.gov/pubmed/25082472>) exploring long-term stroke survivors' motivations for taking up and continuing with an exercise programme.
- A methodological study investigating how to judge whether an exercise-based rehabilitation programme has been delivered true to the way in which it was designed.

For further information about this development work please contact [Dr Sarah Dean \(mailto:S.Dean@exeter.ac.uk?subject=Message%20from%20ReTrain%20web%20page\)](mailto:S.Dean@exeter.ac.uk?subject=Message%20from%20ReTrain%20web%20page).

## Outcomes

We were able to recruit more participants than expected in the pilot feasibility trial and the study showed excellent levels of participant retention. There was no apparent outcome measure burden to participants and data completion levels were good overall. Participant and trainer interviews confirmed the acceptability of the ReTrain intervention and the trial procedures.

We successfully rehearsed the methodology to assess intervention fidelity and capture service use and the pilot trial was successful with clear demonstrations of the acceptability and feasibility of the intervention and trial procedures.

We have published a series of paper that outline these successes. An application for a future definitive multi-centre RCT of ReTrain is warranted.

## Further information

The ReTrain protocol paper is publicly available from [BMJ Open](https://bmjopen.bmj.com/content/6/10/e012375.abstract) (<https://bmjopen.bmj.com/content/6/10/e012375.abstract>).

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To find out more about the project's successes, please read our [news article](https://www.arc-swp.nihr.ac.uk/news/2016/10/20/retrain-project-success) (<https://www.arc-swp.nihr.ac.uk/news/2016/10/20/retrain-project-success>).

## Related publications

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## Collaborators

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- Professor Anne Forster
- Professor Rod Taylor
- Professor Anne Spencer
- Professor Martin James
- Rhoda Allison
- Shirley Stevens
- Dr Meriel Norris
- Professor John Campbell

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## Research themes

Themes:

Complex Care 

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