



Chest  
Heart &  
Stroke

# Our Research



## Can we improve our post-rehab programme for stroke survivors by adding arm exercises?

Funded 2020-21. Dr Katy Pedlow, Ulster University.

**PREP (Post Rehab Exercise Programme)** is our physio-led, community based rehab programme for stroke survivors. Currently it focuses on lower limb exercises. Would adding upper limb exercises be of benefit for those taking part in the programme?

Losing the ability to use an arm and hand after stroke is a devastating experience that can affect the person's ability to take part in everyday activities, and often results in reduced quality of life. Some recovery is possible, and

many people living with the effects of a stroke can start to learn to use their arm and hand again.

The NHS offers therapy in first three months after their stroke. But stroke survivors, their loved ones, and the professionals who look after them all agree that once this statutory rehab ends, further support is needed. Adding arm exercises to our tried and tested PREP programme seems to make sense, but only if the evidence shows it is effective.

We funded Dr Pedlow and her team at Ulster to test whether adding additional upper limb practice into PREP is effective, and importantly, whether it's what PREP users want.

**What difference will this research make?** This research will tackle a gap in post-rehab that stroke survivors have identified as an issue. If adding arm exercises is shown to be effective, the next step will be testing the modified PREP programme with a larger group of people.

Previous research clearly shows that improving arm function improves confidence and increases the amount of physical activity the person then does. This then means the person can do more day to day activities, and hopefully improve their quality of life.

## Using digital technology to help people who have had a "mini" stroke make lifestyle changes.

Funded 2018-19 and 2022-23. Professor Michael Donnelly, QUB.

### Can we create an app version of a tried and tested rehab programme aimed at people who had a Transient Ischaemic Attack (TIA)?

We funded a team at Queen's University to develop an app version of a tried and tested home based rehab programme used by people who have had a TIA (sometimes called a "mini stroke"). TIAs are the same as a stroke, except that the symptoms only last for a short amount of time. This is because the blockage that stops the blood getting to your brain is temporary.

The "Healthy Brain Rehab Manual", used by patients after a TIA, is only available in paper format, but patients regularly ask for a digital version. Prof. Donnelly and his team will develop and test an app version of the programme, called "Brain Fit".

**What difference will this research make?** TIAs are a serious warning sign that a stroke may happen in the future and should not be ignored. Currently, there's no support available for people after they've had a TIA, so this is a great opportunity to "plug a gap", and to make sure we are giving people the support they need.

An easy to use, easy to access rehab app can help recover from their stroke, make lifestyle changes, and may prevent further illness.

## Developing a psychological therapy that's suitable for stroke survivors with cognitive impairments.

Funded 2018-19 and 2022-23. Dr Noeleen McCorry, QUB.

### Cognitive impairments - trouble remembering, learning new things, concentrating, or making decisions - is common after a stroke.

Coming to terms with the impact of a stroke can be difficult. Some people require psychological support, but

most therapies are not suitable for stroke survivors with cognitive problems.

In 2019, we funded Dr McCorry to work with stroke survivors with cognitive issues, to modify a therapy called Acceptance & Commitment Therapy.

Now, they're testing their modified therapy (ImpACT) in a pilot study.

**What difference will this research make?** Developing a suitable therapy means stroke survivors get the psychological support that they need, helping them come to terms with their condition. This study will hopefully show that the modified therapy is effective, before testing it with a larger group of people.

## Can a lifestyle change tool be simplified and still be effective for people who have had a stroke?

Funded 2018-19, Professor Michael Donnelly, QUB.

### Can we modify a behaviour change tool that health professionals and their patients use after a stroke, and make it easier to use?

Research has shown that a tool called SHARE-D helps patients make changes to their health, but that it takes time to administer. We funded Prof. Donnelly to develop a simplified version that frees up health professionals' time, but is still as effective.

**What difference will this research make?** A simplified, but just as effective version will free up professionals, allowing them to support many more of their patients to make lifestyle changes. As a result, healthier choices become healthier lifestyles, and this reduces the chances of future heart disease or stroke.

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