

20 May 2024

Dear Physio4FMD Participant,

Thank you for taking part in the Physio4FMD trial. We are writing to share with you the long awaited results of the trial. You can find more information on the trial website <https://www.physio4fmd.org/>

In these pages we will summarise the results in non-scientific language. We have also included the main scientific report, which is published in the journal, Lancet Neurology.

## What is functional neurological disorder (FND)?

FND is a condition that can cause a range of symptoms including:

- Problems with movement, such as tremor, weakness, and difficulty walking
- Problems with sensation, such as numbness, and pins and needles
- Seizures or blackouts (functional seizures, also called dissociative seizures/attacks)

The symptoms are caused by a problem with functioning of the nervous system. It is sometimes described as a software issue in the brain, rather than a hardware problem.

## What is functional motor disorder (FMD)?

**Functional motor disorder**, or FMD is a term we use to describe the symptoms of FND that affect movement. For example, weakness, tremor, and walking difficulty. FMD is a type of functional neurological disorder.

## Why did we do the trial?

Over the years, lots of people with FMD have told us that they benefited from having neuro-physiotherapy. However, some people are not able to access physiotherapy on the NHS. One reason for this was that there was no strong evidence that physiotherapy helps people with FMD. Also, we did not know what type of treatment a physiotherapist should provide.

We therefore wanted to test whether physiotherapy was an effective treatment for people with FMD.

## What did we do?

We conducted a randomised controlled trial, comparing specialist physiotherapy (Physio4FMD programme) to standard physiotherapy suitable for people with neurological symptoms.

Between 19 October 2018 and 31 January 2022, 247 people with FMD enrolled in and completed our research trial. The trial was held in 11 hospitals in Scotland and England.

Half were randomly assigned to receive the Physio4FMD physio programme and the other half received standard physiotherapy for neurological symptoms.

COVID-19 lockdowns caused an overall delay of 2 years for the trial. Also, there were 89 participants whose treatment was delayed or prevented by COVID-19 lockdowns in 2020.





### Usual Treatment

People allocated to this group were referred to their local physiotherapy service for treatment of neurological symptoms. The physiotherapist provided the usual treatment that the service offers.

### Physio4FMD “Specialist Physio”

People in this group received 9 sessions of physiotherapy and a follow-up session. The treatment aimed to help people to understand their symptoms and retrain “automatic” movement.

We used a range of questionnaires to compare the outcomes from the two treatments. All participants completed questionnaires before treatment, after 6-months, and finally after 12-months.

We were mostly interested in how people fared after 12-months to understand the longer-term impact of treatment.

Randomisation (allocating participants to one of two treatments by chance) is used in clinical trials to prevent the researchers and participants from biasing or influencing the results. We have used a picture of a coin toss to symbolise randomisation here. In reality, randomisation was completed by a computer programme.

### What did we find?

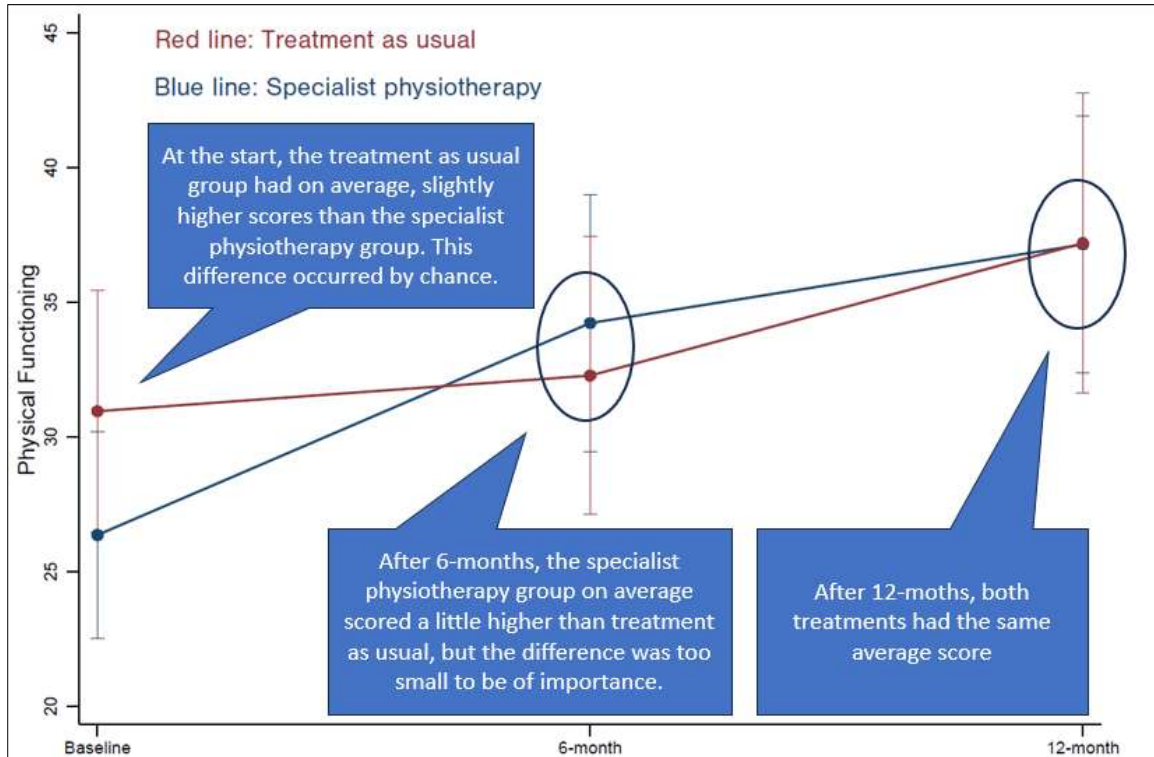
Randomised controlled trials need to choose a primary outcome. This is the outcome of greatest interest. The primary outcome in this trial was the **SF36 Physical Function**.

The SF36 Physical Function is part of a questionnaire that asks about your ability to complete vigorous activities, moderate activities, lifting and carrying, mobilising, washing and dressing. The maximum score is 100 and indicates normal function without any limitations.

**The main finding of the Physio4FMD trial is: Both treatment groups improved in their scores of SF36 Physical Function and there was no difference between the groups.**

This can be seen in the graph over the page. The blue line is specialist physiotherapy. The red line is usual physiotherapy.

### The Primary Outcome: Physical Functioning



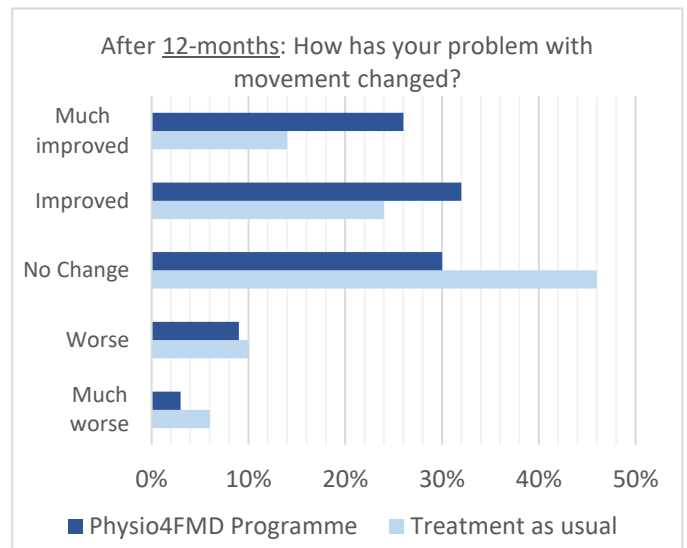
### What else did we find?

We asked everyone: “After physiotherapy the problem with my movement is (tick one box):

Much improved,  Improved,  No change,  Worse, or  Much worse.”

Here are the results (out of 247 people)

Change in movement problem	Physio4FMD “Specialist Physio”	Treatment as usual physiotherapy
<b>After 6-months</b>		
Much Improved	22%	5%
Improved	41%	23%
No Change	30%	62%
Worse	5%	8%
Much Worse	2%	2%
<b>After 12-month</b>		
Much Improved	26%	14%
Improved	32%	24%
No Change	30%	46%
Worse	9%	10%
Much Worse	3%	6%



**In summary, after 12-months 58% of people in the specialist physio group felt their movement problem had improved compared to 38% of people who received usual physiotherapy.**

## Other findings

The specialist physiotherapy group had slightly better scores on some questionnaires which asked about mental health and they reported slightly better understanding of their symptoms.

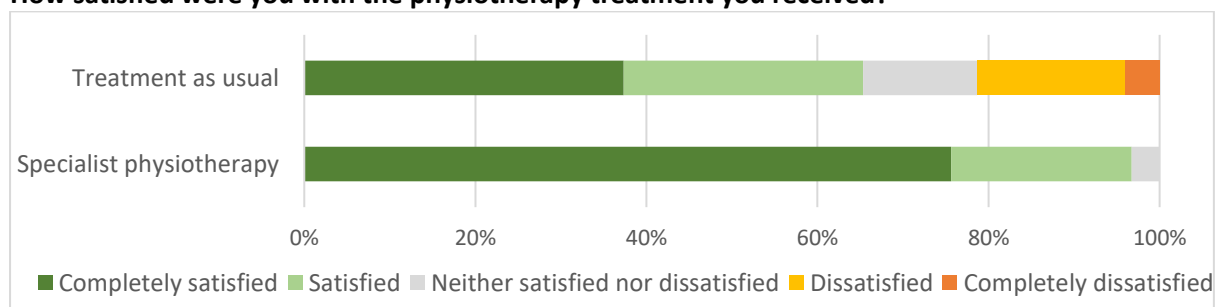
On average, there were no great changes in either group in

- Ability to walk without walking aids
- Pain scores
- Fatigue scores

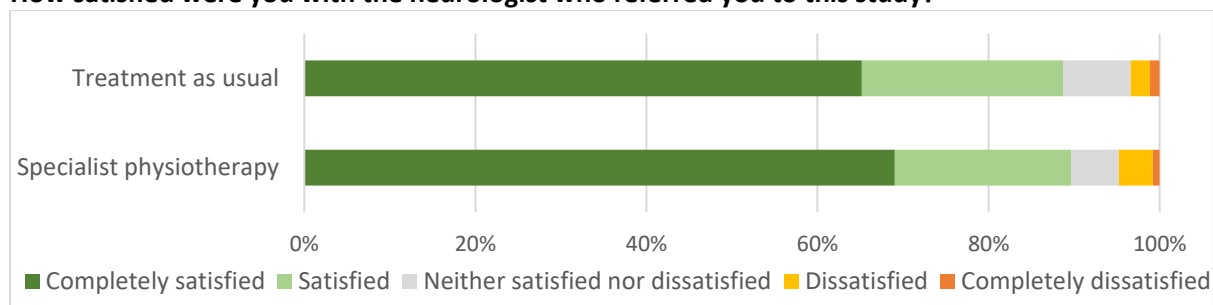
Health economists analysed the data to determine whether specialist physiotherapy would be considered good value for money for the NHS. This is called cost effectiveness. We found that specialist physiotherapy was very likely to be cost effective. This will be reported in a separate journal article.

We asked for feedback about your neurology and physiotherapy treatment. Most people, although not everyone, were satisfied with the treatment they received. See the graphs below.

### How satisfied were you with the physiotherapy treatment you received?



### How satisfied were you with the neurologist who referred you to this study?



It is worth noting that the neurologists who took part in the trial had an interest in working with people with FMD.

## Conclusions

The main finding is that specialist physiotherapy did not result in better physical function scores (on average) than usual physiotherapy.

However, more people who received specialist physiotherapy felt their movement problem had improved compared to those who received usual physiotherapy. There may also be other benefits to specialist physiotherapy, for example in helping people to understand their symptoms.

Physiotherapy provided by clinicians experienced in seeing people with neurological symptoms appears to be a valuable treatment for people with FMD.

## More Information and further outcomes from the Physio4FMD Trial

This concludes the most important findings from the Physio4FMD Trial. There will be more outcomes and study findings published in the coming months. If you would like to keep up with these, we will report them on the trial website: [www.physio4fmd.org/](http://www.physio4fmd.org/)

We will also describe the results in a short animation, which will be available soon via the website.

## Thank you

Finally, we would like to thank you, once again, for helping us to study the value of physiotherapy for people with FMD. The time you spent coming to appointments and answering questions has made a difference to our understanding. We hope that this research will lead to easier access and better quality treatment for people with FMD all around the United Kingdom.

## For more information and support

The website [www.neurosymptoms.org](http://www.neurosymptoms.org) is an excellent resource for information about FND

FND Charities are run by people with lived experience of FND (this is not a complete list)

- FND Hope UK <https://fndhope.org/>
- FND Action <https://www.fndaction.org.uk/>
- FND Dimensions <https://fnddimensions.org/>

**If the information in this report has caused you distress or concern**, please contact your GP, or the services listed below can be helpful for crisis support (contact details for the United Kingdom)

- If your life is at risk right now, call 999 (in the UK) and go to A&E
- Hopeline 247, Tel 0800 068 4141, Text 88247, email [pat@papyrus-uk.org](mailto:pat@papyrus-uk.org)
- Samaritans Tel 116 123
- Calm (5pm-12am) Tel 0800 58 58 58

## The Scientific Report

The scientific report of the study follows on from here.

Your sincerely,

**Glenn Nielsen, on behalf of the Physio4FMD trial team**  
**Physio4FMD.org**

Thank you to the FND Charities FND Hope, FND Action, and FND Dimensions for supporting this research. We would also like to thank our independent oversight committees and previous service users for collaborating in this study.

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