

# Practical management of behavioural impairment in motor neurone disease: MiNDToolkit feasibility study

<b>Submission date</b> 17/05/2021	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 26/05/2021	<b>Overall study status</b> Completed	<input checked="" type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 25/09/2024	<b>Condition category</b> Nervous System Diseases	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Motor neurone disease (MND) is an uncommon condition that affects the brain and nerves. It causes weakness that gets worse over time.

MND is now recognised as a multi-system disorder, affecting also people's behaviours and cognitive abilities - referred to as 'non-motor symptoms'. This usually occurs in up to 50% of people diagnosed with MND. Clinical assessments have been developed to support identification of these non-motor symptoms, but appropriate support to manage these symptoms are lacking.

This study aims to test the feasibility (can this be done?) of a new psychoeducational intervention for carers, delivered via a bespoke online platform, with optional support from healthcare professionals.

### Who can participate?

Carers of people with Motor Neurone disease - family carer/relative/live-in professional carer, who present with additional behavioural impairments.

### What does the study involve?

Carers (participants) complete online screening assessments to verify they are eligible to the study. Next, carers complete baseline assessments, also online. Once these assessments are complete, carers are randomly assigned to the MiNDToolkit intervention or control group. Carers in the intervention group will access the online intervention for 3 months. Healthcare professionals involved in the care of their person with MND may also support the intervention delivery. At the end of the 3-month period, carers complete a follow-up assessment, similar to the baseline assessment. They are then offered to continue using the MiNDToolkit for another 3 months, if they wish to.

Carers in the control group will not access the intervention for the initial 3 months. After this period, carers complete a follow-up assessment, similar to the baseline assessment. They are then offered to start using the MiNDToolkit for 3 months, if they wish to.

What are the possible benefits and risks of participating?

Benefits include access to novel tailored resources for the management of behavioural symptoms, which are currently not available for carers in the UK or other countries.

Risks include distress from completing questionnaires about carers' own health and the person with MND.

Where is the study run from?

University of East Anglia (UK)

When is the study starting and how long it is expected to run for?

July 2020 to March 2023

Who is funding the study?

The Motor Neurone Disease Association (UK)

Who is the main contact?

Prof. Eneida Mioshi, e.mioshi@uea.ac.uk

### **Study website**

<https://mindtoolkit.org/>

## **Contact information**

### **Type(s)**

Scientific

### **Contact name**

Prof Eneida Mioshi

### **ORCID ID**

<https://orcid.org/0000-0002-0066-868X>

### **Contact details**

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## **Additional identifiers**

### **EudraCT/CTIS number**

Nil known

### **IRAS number**

260290

**ClinicalTrials.gov number**

Nil known

**Secondary identifying numbers**

IRAS 260290, CPMS 41888, Grant Codes: Mioshi/May16/934-794

## **Study information**

**Scientific Title**

Practical management of behavioural impairment in Motor Neurone Disease: MiNDToolkit for carers feasibility study

**Acronym**

MiNDToolkit

**Study objectives**

Carers of people with Motor Neurone Disease presenting with behavioural symptoms require additional support to manage these non-motor symptoms. A novel online psychoeducational intervention, the MiNDToolkit, may be useful in supporting carers dealing with these non-motor symptoms.

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

Approved 05/05/2021, London Queen Square Research Ethics Committee (HRA NRES Centre Bristol, 3rd floor, block B, Whitefriars, Lewins Mead, Bristol, BS1 2NT, UK; +44(0)207 104 8061; queensquare.rec@hra.nhs.uk), ref: 19/LO/0692

**Study design**

Interventional pilot open-label randomized controlled design feasibility study

**Primary study design**

Interventional

**Secondary study design**

Randomised cross over trial

**Study setting(s)**

Internet/virtual

**Study type(s)**

Other

**Participant information sheet**

Not available in web format, please use contact details to request a participant information sheet.

**Health condition(s) or problem(s) studied**

Motor neurone disease with behavioural symptoms

## **Interventions**

The new online intervention comprises modules that:

- (1) target symptoms identified in the screening/baseline assessments;
- (2) suggest which strategies the person with MND and carer would benefit from;
- (3) utilise these techniques during each week.

In addition, (4) if the HCP of the person with MND has also been trained, they will demonstrate those techniques for the carers during consultations.

Each week, the carer will be given modules with information on behavioural symptoms as well as strategies to apply, tailored to the issues identified during the screening/baseline assessments.

It is expected that the carer will apply these techniques in their daily routine after the modules for a week. At any following MND consultation with a HCP trained in the MiNDToolkit, a review of strategies utilised will be recorded and the HCP will discuss with the carer what may have worked or not, and examples of context. The healthcare professionals will then record this information on the MiNDToolkit online platform.

The intervention period is 3 months.

Participants in the control group will be offered the opportunity to use the MiNDToolkit after the follow-up assessment. Participants in the intervention group will be offered the opportunity to continue using the MiNDToolkit for an additional three months, after the follow-up assessment.

### **Randomisation:**

When a consented participant has completed the screening and pre-intervention assessment, the trial manager will receive an automatic email notification that a participant is ready for randomisation. They will contact (by email or phone) the CTU data management team which holds a randomisation list generated by the study statistician and held on secure CTU servers. Randomisation is simple 1:1 randomisation to either intervention or control arm with no stratification or minimisation. The next allocation on the randomisation list will be communicated to the trial manager who will log this on the platform. The platform sends a text and/or email notification to the participant informing them of their allocation and the next steps in the study processes, e.g. access to the online modules if in the intervention arm or the next follow up survey in the control arm.

## **Intervention Type**

Behavioural

## **Primary outcome measure**

Feasibility of the MiNDToolkit online intervention in MND Specialist Settings measured using:

1. Recruitment, eligibility, and attrition: Numbers of potentially eligible patients who meet the inclusion criteria, Number of participants subsequently recruited into the study, rates and reasons for refusal, numbers ineligible, reasons for ineligibility, attrition rate, and reasons for withdrawing throughout the study. Timepoint: During the trial recruitment phase
2. Resources needed to complete the online MiNDToolkit: length of time carers spend on modules per week, length of time required for HCPs to provide online and 'face-to face' (e.g. could be via online appointments) feedback per participant, and the amount and nature of feedback provided
3. Carer adherence to MiNDToolkit: records of access and engagement with online MiNDToolkit (number of modules accessed; how long; contacts with HCPs). Timepoint: During the

intervention phase and post-intervention phase

4. Carer acceptability: aspects of the MiNDToolkit that carers found helpful and unhelpful, satisfaction with the intervention and HCP interactions, and reasons for withdrawing from the MiNDToolkit. Timepoint: During the intervention phase and post-intervention phase
5. Therapist acceptability: satisfaction with training and supervision evaluated through qualitative interviews at the end of the study, and intervention fidelity monitored through their online notes, entered directly in the platform, and weekly drop in sessions offered

### **Secondary outcome measures**

Current secondary outcome measures as of 26/11/2021:

Measured at baseline, and post-intervention at 3 months.

1. Severity of depression for the carer measured using The Patient Health Questionnaire 9 (PHQ-9)
2. Generalized anxiety disorder for the carer measured using The Generalized Anxiety Disorder Questionnaire 7 (GAD-7)
3. Services and supports currently being utilised by the patient measured using The Adapted Client Service Receipt Inventory (CSRI)
4. Caring experience measured using The Carer Experience Scale (CES)
5. Wellbeing for the carer measured using ICEpop CAPability measure for Adults (ICECAP-A)
6. Psychological flexibility via the Acceptance and Action Questionnaire (AAQ)

Previous secondary outcome measures:

Measured at baseline, and post-intervention at 3 months.

1. Severity of depression for the carer measured using The Patient Health Questionnaire 9 (PHQ-9)
2. Generalized anxiety disorder for the carer measured using The Generalized Anxiety Disorder Questionnaire 7 (GAD-7)
3. Services and supports currently being utilised by the patient measured using The Adapted Client Service Receipt Inventory (CSRI)
4. Caring experience measured using The Carer Experience Scale (CES)
5. Wellbeing for the carer measured using ICEpop CAPability measure for Adults (ICECAP-A)

### **Overall study start date**

01/07/2020

### **Completion date**

30/03/2023

## **Eligibility**

### **Key inclusion criteria**

Participants will be family carers, relatives, or live-in professional carers of:

1. Patients with a diagnosis of MND with cognitive impairment or behavioural impairment, based on Strong et al. (2017) diagnostic criteria, or
2. Patients with a diagnosis of MND-FTD based on Strong et al. (2017) diagnostic criteria;
3. Carers will have at least 14 hours of contact with the person with MND per week and be willing to participate in research activities. Carers must be aged 18 years or over

### **Participant type(s)**

Carer

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Both

**Target number of participants**

20-30

**Total final enrolment**

55

**Key exclusion criteria**

Inability to read or communicate in English (with or without support)

**Date of first enrolment**

01/07/2021

**Date of final enrolment**

16/12/2022

**Locations****Countries of recruitment**

England

United Kingdom

Wales

**Study participating centre****West Pottergate Medical Centre**

Norfolk Community Health and Care NHS Trust

Research Office, Ground Floor

Earlham Road

Norwich

United Kingdom

NR2 4BX

**Study participating centre****Brighton General Hospital**

Elm Grove

Brighton  
United Kingdom  
BN2 3EW

**Study participating centre**  
**Royal Hallamshire Hospital**  
Glossop Road  
Sheffield  
United Kingdom  
S10 2JF

**Study participating centre**  
**Huddersfield Royal Infirmary**  
Acre Street  
Huddersfield  
United Kingdom  
HD3 3EA

**Study participating centre**  
**Leicestershire and Rutland Hospice**  
Groby Road  
Leicester  
United Kingdom  
LE3 9QE

**Study participating centre**  
**Marie Curie Cardiff and Vale Hospice**  
Bridgeman Road  
Penarth  
United Kingdom  
CF64 3YR

**Study participating centre**  
**Prince Philip Hospital**  
Bryngwynmawr  
Dafen  
Llanelli  
United Kingdom  
SA14 8QF

**Study participating centre****Morrison Hospital**

Heol Maes Eglwys

Cwmrhydyceirw

Swansea

United Kingdom

SA6 6NL

**Study participating centre****West Suffolk Hospital**

Hardwick Lane

Bury St. Edmunds

United Kingdom

IP33 2QZ

**Study participating centre****Ipswich Hospital**

Heath Road

Ipswich

United Kingdom

IP4 5PD

**Study participating centre****Norfolk and Norwich University Hospital**

Colney Lane

Colney

Norwich

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NR4 7UY

**Sponsor information****Organisation**

University of East Anglia

**Sponsor details**

Research and Innovation Services

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**Sponsor type**

University/education

**Website**

<https://www.uea.ac.uk/>

**ROR**

<https://ror.org/026k5mg93>

## **Funder(s)**

**Funder type**

Charity

**Funder Name**

Motor Neurone Disease Association

**Alternative Name(s)**

MND Association, MNDA

**Funding Body Type**

Private sector organisation

**Funding Body Subtype**

Associations and societies (private and public)

**Location**

United Kingdom

## **Results and Publications**

**Publication and dissemination plan**

Dissemination will be two-pronged: scientific and public audiences.

Scientific dissemination will include conference presentations and scientific papers.

Public dissemination will include online resources, talks to the public, and policy makers.

**Intention to publish date**

30/04/2024

**Individual participant data (IPD) sharing plan**

The datasets generated during and/or analysed during the current study are not expected to be made available as this is a feasibility study, which does not aim to evaluate the efficacy of the intervention.

### IPD sharing plan summary

Not expected to be made available

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Protocol file</a>	version 9	06/02/2023	06/07/2023	No	No
<a href="#">Statistical Analysis Plan</a>	version 1.0		06/07/2023	No	No
<a href="#">Basic results</a>			25/09/2024	No	No
<a href="#">Results article</a>		15/05/2024	25/09/2024	Yes	No
<a href="#">Results article</a>	Process evaluation	15/05/2024	25/09/2024	Yes	No